

# Matsushima Mycological Memoirs 10

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Matsushima Mycological Memoirs No. 10 was published only in CD-ROM.

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**1336 *Acremonium macrocatenatum* anam. sp. nov.**

**Descr** Coloniae in b/c-medio diffusae, albae, hyphis aeriis pauperis, conidiophoris abundantibus. Hyphae vegetativae ramosae, septatae, laeves, hyalinae, 1.2-3  $\mu$  latae. Conidiophora mononematosa, macronematosa, e hyphis repentibus vel aeriis perpendiculariter oriunda, cylindrica, simplicia vel supra ramosa, laevia; ubi simplicia 1-2-septata, 60-80  $\mu$  longa ( cum phialidibus ); ubi ramosa altitudine tota ( cum phialidibus ) 100-200  $\mu$ , parte inferiore erecta simplicia cylindrica septata, basi 4-6  $\mu$  lata, sursum leviter angustata, sub prima ramificatione 3-4.5  $\mu$  lata, supra semel, interdum usque ad 3-plo generatim binarie ramosa, cellulas conidiogenas terminata; cellulae conidiogenae cylindricae, 15-40  $\mu$  longae, supra sursum gradatim angustatae, prope basin 3-5.5  $\mu$  latae, apice 1.5-3  $\mu$  latae, laeves, hyalinae, apice enteroblasticae-phialidicae, sine distinctis collarulis, ad orem parietibus periclinalibus spissescens. Conidia forma magnitudineque variabilia, ellipsoidea ad cylindro-ellipsoidea, unicellularia, (12.5-)15-23 x 4.5-8  $\mu$ , laevia, hyalina, alba in massa, in catenas intricatas disposita vel irregulariter aggregata. Teleomorphosis ignota. Coloniae in CMA modice crescentes, eburneae, fere immersae, hyphis aeriis sparsis, conidiophoris abundantibus dispersis, margine definito. Conidiophora ut in b/c-medio. Conidia ellipsoidea ad cylindro-ellipsoidea, unicellularia, laevia, hyalina, (11-)15-23(-27) x 4.2-8.5  $\mu$ , ad apices phialides aggregata vel guttas mucosas lecta. Teleomorphosis: Plures globosae pallide aurantiacae structurae adsunt, quae maturitatem non attingentes, probabiliter primordia perithecorum *Nectriae* erunt. **Etym.**: *macrocatenatum* <= conidia are "big and chained".

**Hab** Fronde cariosa palmarum in fundo sylvarum densarum; prope Colonia Angamos, Peru ( located at Peru-Brazil border of the Amazon ); July 1994. **Typus**: cultura b/c-medio exsiccata, MFC-4P603.

**Mem** The majority of *Acremonium* Link species ( = *Cephalosporium* Corda ) have conidia less than 10  $\mu$  long. This new species belongs to the macroconidial group of genus *Acremonium* ( conidia over 10  $\mu$  long ). Following taxa are checked for identification: E. C. Deighton & K. A. Pirozynski (1972), Mycol. Pap. **128**. => Degenerated cultural forms of certain *Cylindrocarpon* with simple conidiophores ( phialides ), such as *C. macrosporum*, *C. ugandense*, *C. luteoviride*, etc. and *Gabarnaudia* species ( anamorphoses of *Sphaeronaemella* species ) / D. L. Hawksworth (1972), Trans. Br. mycol. Soc. **58**: 510-512. => *Acremonium hypholomatis* ( Boedijn ) D. Hawksworth: conidia narrowly ellipsoid with a narrowly conico-truncate base, 12.5-18 x 4-7  $\mu$ . / *Paecilomyces iriomotanus* Matsushima, in Icones Microfungorum a Matsushima Lectorum, 1975, p. 105. => conidia 9-14 x (3-)4-5.5  $\mu$ . / G. Morgan-Jones & W. Gams (1982), Mycotaxon **15**: 311-318. => *Acremonium coenophialum* sp. nov.: conidia 7.5-10(-11) x 1.5-3.0  $\mu$ . / B. L. Brady (1986), Trans. Br. mycol. Soc. **87**: 486-487. => *Acremonium cajani* sp. nov.: conidia ellipsoidea, 10-22 x 8-12  $\mu$ . Fide Dingley (1957), anamorphosis of *Hypocrea citrina* ( Pers. ) Fr. was *Acremonium* ( ut *Cephalosporium* ), in which conidia were hyaline smooth, 7-11 x 3-4  $\mu$ . / *Acremonium uncinatum* W. Gams, O. Petrini et D. Schmidt (1990), Mycotaxon **37**: 67-71. => conidia uncinata, 5-13 x 1.0-2.0  $\mu$ . / G. Okada et al. (1993), Trans. mycol. Soc. Jap. **34**: 171-185. => *Acremonium alcalophilum* G. Okada: conidia variable in form and size, 4.4-13.3 x 2.5-5.5  $\mu$ , l/b ratio = 1.0-4.0. / *Acremonium grandisporum* Matsushima, in Mats. Myc. Mem. **7**, p. 42, no. 1048. 1993. => conidia (20-) 30-65(-90) x 7-15  $\mu$ . / *Acremonium neocaledoniae* Roquebert & Dupont, in Dupont et al. (2000), Mycotaxon **75**: 349-356. => conidia round ellipsoid, attenuated and truncate at the base, 7.5-11.5 x 5.6-7.5 ( mostly 9.5-6.5 )  $\mu$ .

**Ref** R. S. Sukapure & M. J. Thirumalachar (1966), Mycologia **58**: 351-361. => Indian *Cephalosporium* spp. // W. Gams (1971), *Cephalosporium*-artige Schimmelpilze ( Hyphomycetes ), Stuttgart. // C. Booth & R. H. Stover (1974), Trans. Br. mycol. Soc. **63**: 503-507. => Microconidial states of some *Cylindrocarpon* species such as *C. musae* Booth & Stover. // G. J. Samuels (1976), N. Z. J. Bot. **14**: 231-260. Perfect states of *Acremonium*, the genera *Nectria*, *Actiniopsis*, *Ijuhya*, *Neohenningsia*, *Ophiodictyon*, and *Peristomialis*. // G. J. Samuels (1988), Mem. N. Y. Bot. Garden **48**: 1-78. => Some *Acremonium* and *Cephalosporiopsis* species of *Nectria* and related genera. // R. Lowen (1995), Mycotaxon **53**: 81-95. *Acremonium* section *Lichenoides* section nov. and *Pronectria oligospora* species nov.

**Photo**

page 4

924, 925 = Habit on b/c-medium, showing entangled conidial chains.

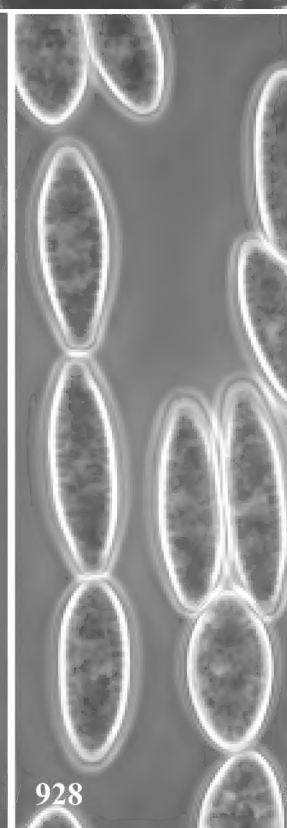
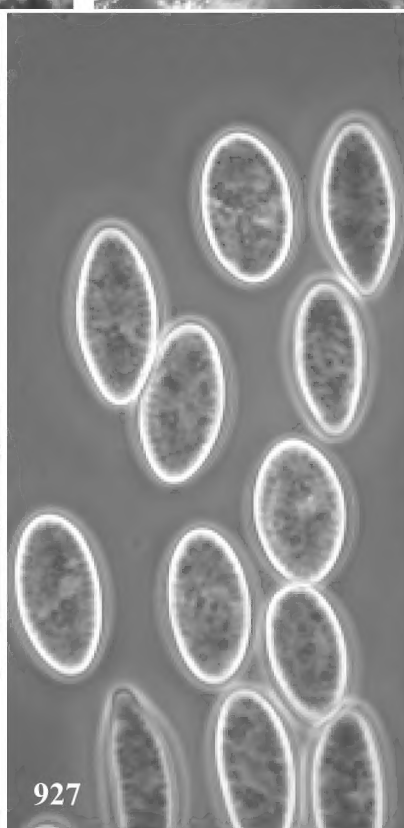
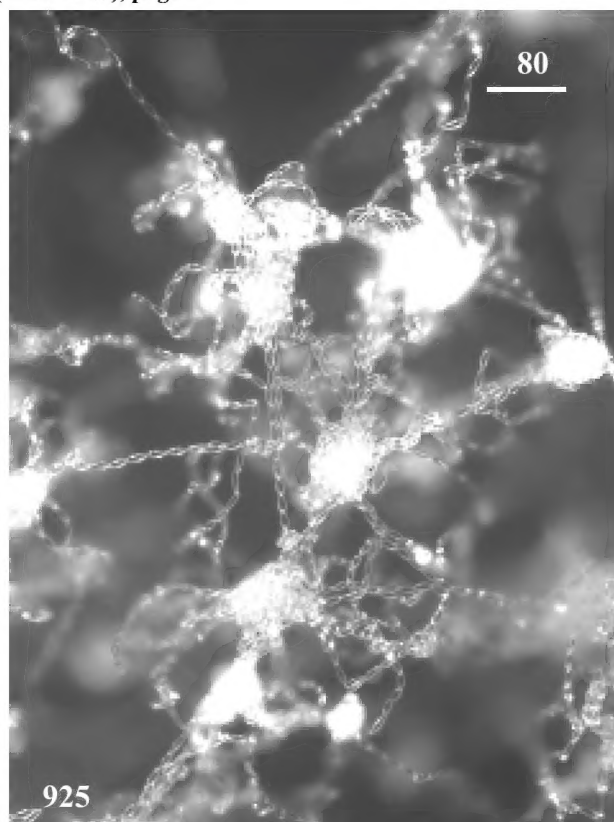
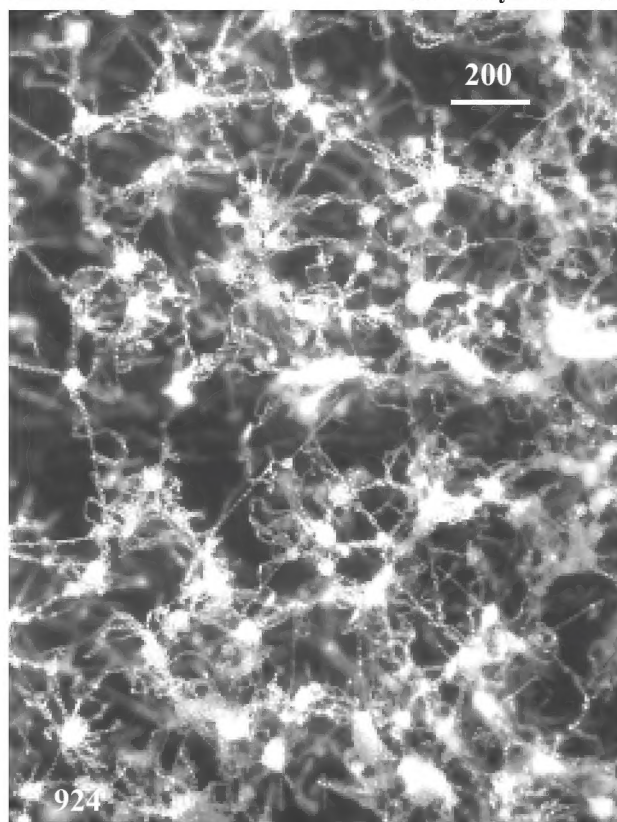
926, 927, 928 = Conidia. ( in phase contrast )

page 5

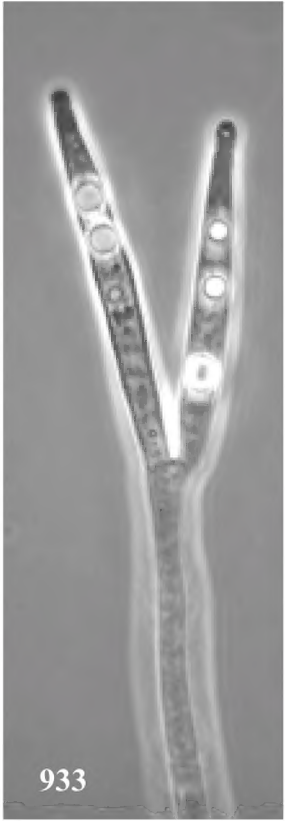
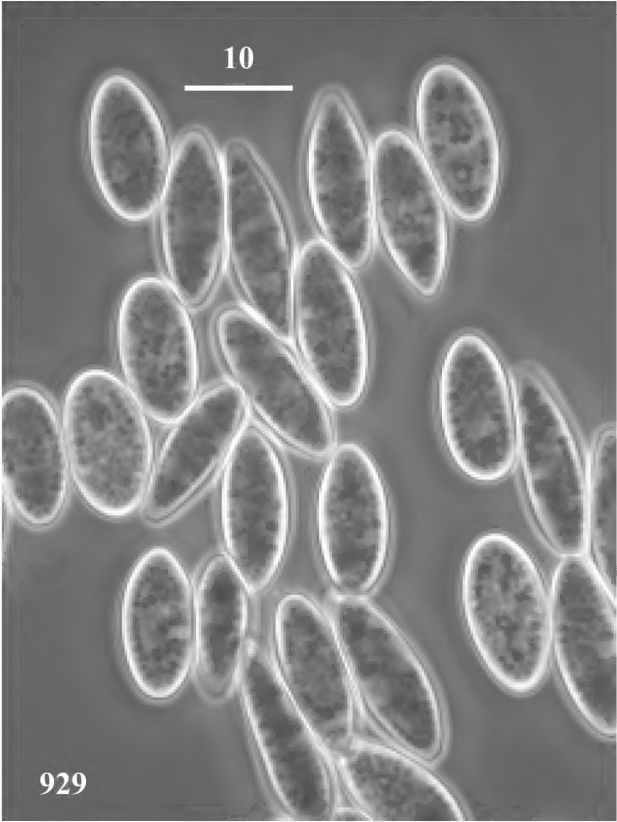
929 = Conidia. ( in phase contrast )

930 = A side branch of a conidiophore. ( in phase contrast )

931, 932, 933, 934 = Conidiogenous cells in apices of conidiophores. ( in phase contrast )







**1337 *Dendrodochium tenue*** T. Petch (1944). Trans. Br. mycol. Soc. **27**: 142.

**Descr** Coloniae in b/c-medio diffusae, hyphis aeriis sparsis. Hyphae vegetativae ramosae septatae hyalinae, tenui- vel crassi-tunicatae, 1.5-3.0  $\mu$  latae. Sporodochia dissita patelliformia superficialia, facile detergibilia e substrato fere sine vestigio, sine setis, ab apice vis. plusminusve circularia 150-750  $\mu$  in diam, initio solitaria alba, postea generatim confluentia, maturitate massis conidialibus hemisphaericis roseis mucosis oblecta, margine cincta fimbriis, quae sunt hyphae usitatae hyalinae ( albae in massa ) radiatae steriles 100-150  $\mu$  longae. Sporodochia infra e telis mycelialibus et supra hymeniis fertilibus composita; illa tenues e hyphis ramosis septatis relative crassitunicatis 1.5-3.0  $\mu$  latis compositae, hoc e conidiophoris et/vel cellulis conidiogenis composita. Conidiophora ubi praesentia e tela myceliali basali oriunda, contigua cylindrica, simplicia vel parce ramosa; cellulae conidiogenae ad apicem conidiophori 3-5 in fasciculo dispositae vel e tela myceliali basali directe oriundae, cylindricae, rectae vel prope basim leviter incurvae, 6.5-20  $\mu$  longae 1.5-2.5  $\mu$  latae, hyalinae, apice ad ca. 0.7  $\mu$  angustatae cum minutis collarulis, quae parietibus periclinalibus spissescuntibus. Conidia oblonga vel ellipsoidea, basi fere non cicatricosa, 2.5-3.5 x 1.5-2.5  $\mu$ , appendice nulla, laevia, hyalina, rosea mucosa in massa.

**Hab** MFC-21013. E minutis cariosis fragmentis plantarum in fundo sylvae ( praecipue arbores dicotyledonum ); Kasuga-cho, Hyogo Pref., Japan; April 1999.

**Mem** Simile *Myrothecii*, a priore differt colore massae conidialis. *Myrothecium* conidiis in massa atro-viridibus.

**Ref** T. Petch (1944). Trans. Br. mycol. Soc. **27**: 142. => *Dendrodochium tenue* n. sp.: " Sporodochiis aurantiis rotundatis ad 1 mm. diam., vel confluentibus irregularibus, planis, tenuissimis, hypothallo albo byssoideo cinctis; conidiophoris ramosis, ramis in phialidibus paucis angusto-ampullaceis, 8-10  $\mu$  alt., infra 1  $\mu$  diam., terminatis; conidiis continuis, angusto-ovalibus vel oblongo-ovalibus, obtusis, hyalinis, 2-4 x 1-1.5  $\mu$ . " On abjected sporangia of *Pilobolus*, Nuwara Eliya, Oct. 1927.

**Photo**

page 7

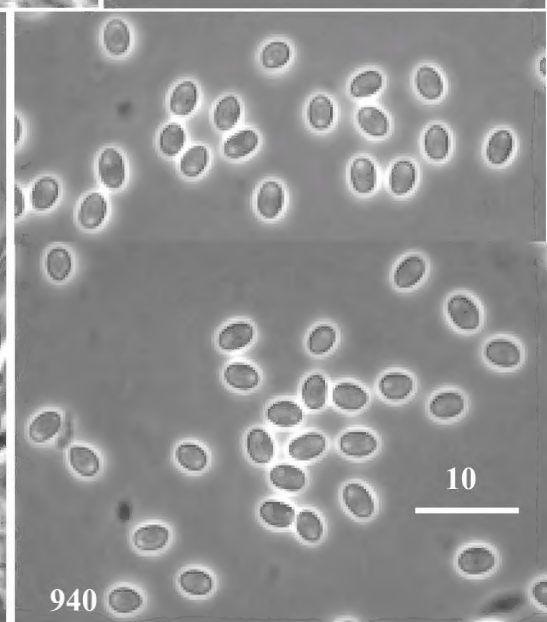
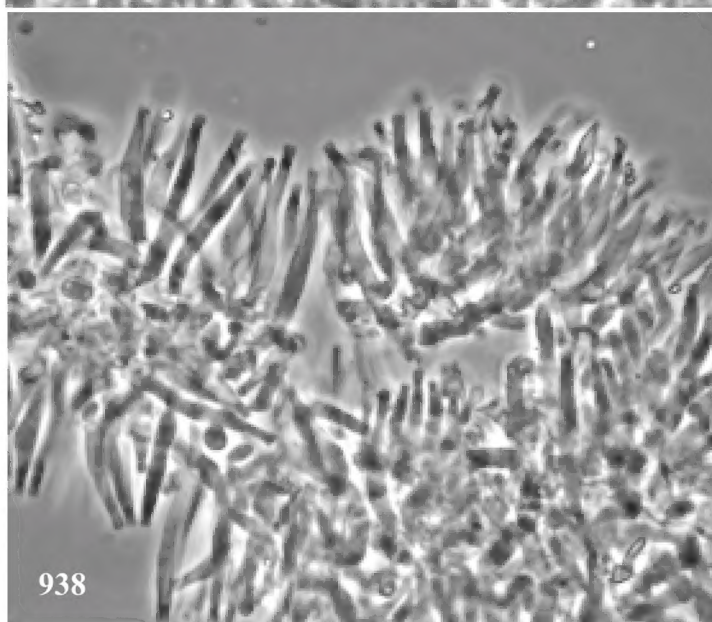
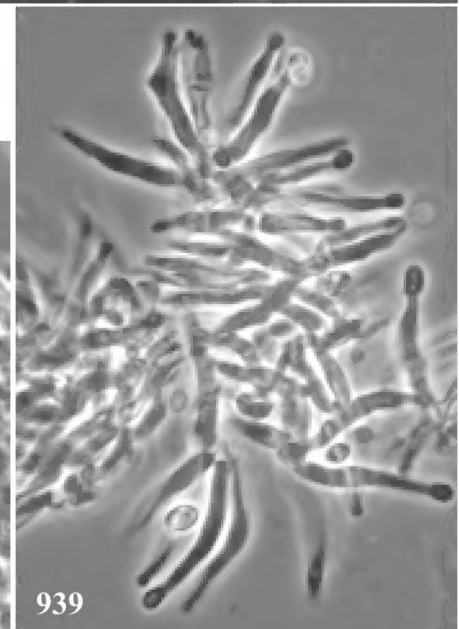
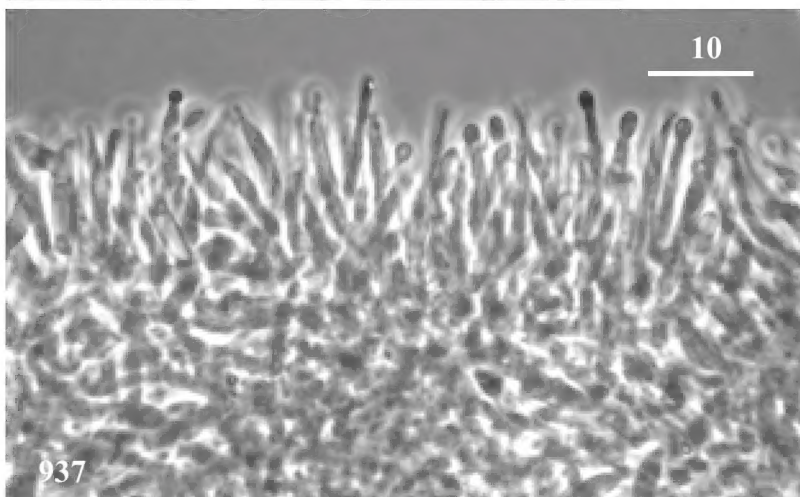
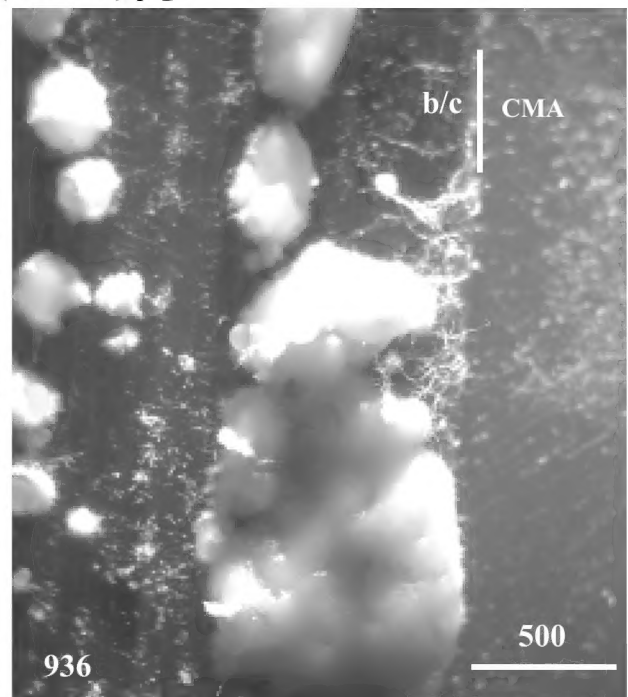
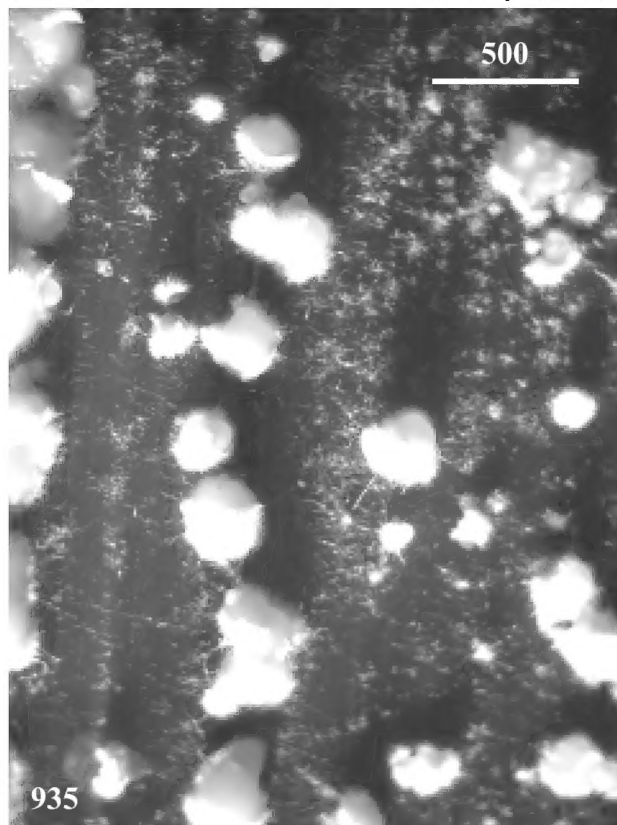
935, 936 = Habit, sporodochia on b/c-medium.

937, 938, 939 = Conidiophores and conidiogenous cells. ( by phase contrast )

940 = Conidia. ( by phase contrast )

page 203 ( color plate )

1770, 1771 = Habit, sporodochia on b/c-medium



**1338 *Cryptosporiopsis shigaensis* anam. sp. nov.**

**Descr** Coloniae in b/c-medio diffusae, laxae arachnoideae, albae. Hyphae vegetativae ramosae septatae 1-5  $\mu$  latae hyalinae interdum pallide luteo-brunneae. Sporodochia dissita ad interdum confluentia, superficialia, facile detergibilia e substrato, aspectu apicali plusminusve circularia, alba, aspectu laterali tholiformia cum massis albis conidiorum, (80-)100-300(-350)  $\mu$  diam., nec setis nec hyphis specialibus; stromata basalia pulvinata pseudoparenchymatica (textura angularis), cellulis hyalinis 4-8  $\mu$  diam; stromata parviores non pseudoparenchymatica sed tegeticulae hyphales sunt. Conidiophora e cellulis externis stromatis dense enascentia, simplicia vel ramosa, septata, frequenter leviter constricta ad septa, e cellulis cylindricis ad doliiformibus, 6-13 x 3-5  $\mu$ , laevibus hyalinis constantia. Cellulae conidiogenae terminaliter integratae vel discretae, lageniformes, determinatae, 7-12 x 4-5  $\mu$ , laeves, hyalinae, ad orem cum parietibus periclinalibus spissescens. Conidia allantoida, unicellularia, basi rotundata non cicatricosa, contento maxime guttulato, (12-)18-27(-32) x 7-10  $\mu$  praecipue 20-25  $\mu$  longa, hyalina, in massam mucosam albam ad brunneo-albam lecta. Microconidia deficientia.

Coloniae in PDA effusae, pallide brunneae, coactae, sub lente abundantibus sporodochiis ut guttulis pallide brunneis postremo brunneis. Hyphae vegetativae ramosae, septatae, 1-6  $\mu$  latae, laeves, hyalinae, vetustate pallide brunneae. Structurae omnes, i. e. stromata conidiophora cellulae conidiogenae conidiaque, initio hyalinae vetustate brunneolentes. **Etym.**: *shigaensis* <= type locality: "Shiga" Pref., Japan.

**Hab** E minutis cariosis fragmentis plantarum in fundo sylvae (praecipue arbores dicotyledonum); Mt. Rokko, Kobe, Japan; March 1999. **Typus**: cultura b/c-medio exsiccata, MFC-21035.

**Mem** The most *Cryptosporiopsis* species have straight ellipsoid conidia as listed in Sutton (1980). Following species are known to have curved conidia: *C. turgida* (Berk. & Br.) Pirozynski & Morgan-Jones (1968), and *C. malanigena* Kowalski, Halmschlager & Schrader (1998). *C. malanigena* is somewhat similar to the new species, but in the former species the development of dark chlamydospores gives black color to agar colonies, and in the latter the colonies are whitish or pale brown in age.

**Ref** B. C. Sutton (1980), The Coelomycetes. p. 509-516. => Twelve species accepted. // K. A. Pirozynski & G. Morgan-Jones (1968), Trans. Br. mycol. Soc. **51**: 185-206. // T. Kowalski, E. Halmschlager & K. Schrader (1998), Mycol. Res. **102**: 347-354. *Cryptosporiopsis melanigena* sp. nov., a root-inhabiting fungus of *Quercus robur* and *Q. petraea*.

**Photo**

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941, 942, 943, 944 = Sporodochia from b/c-medium.

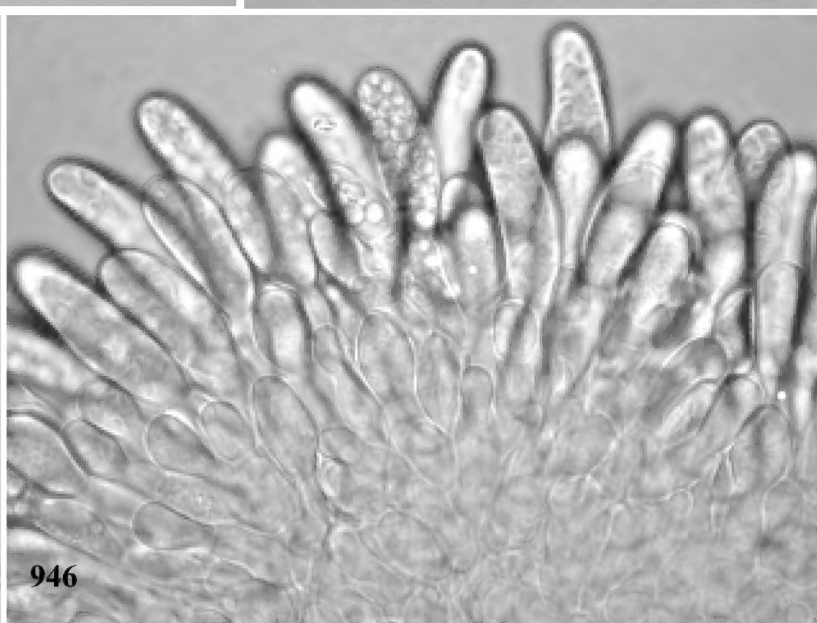
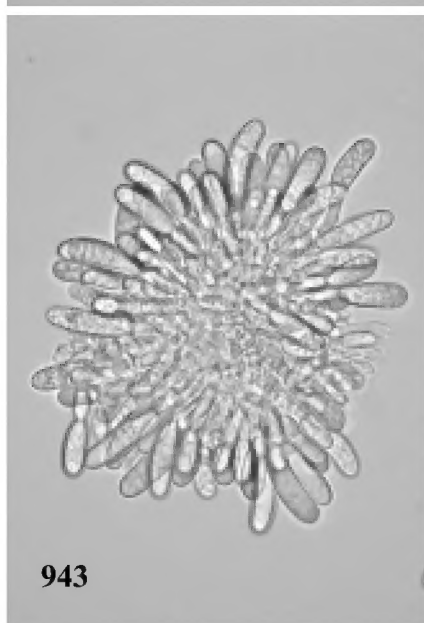
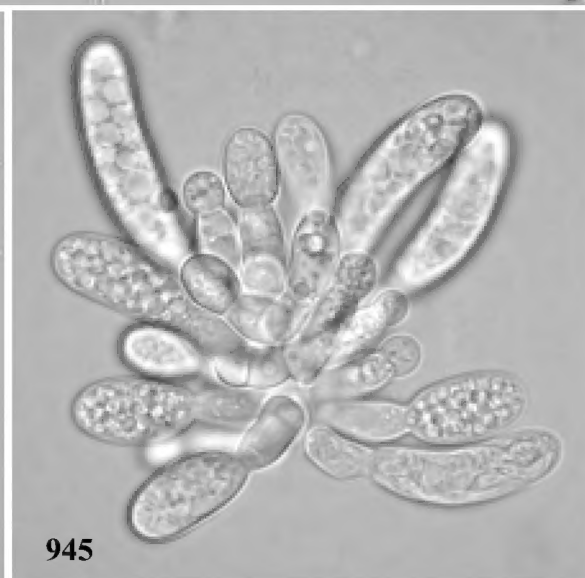
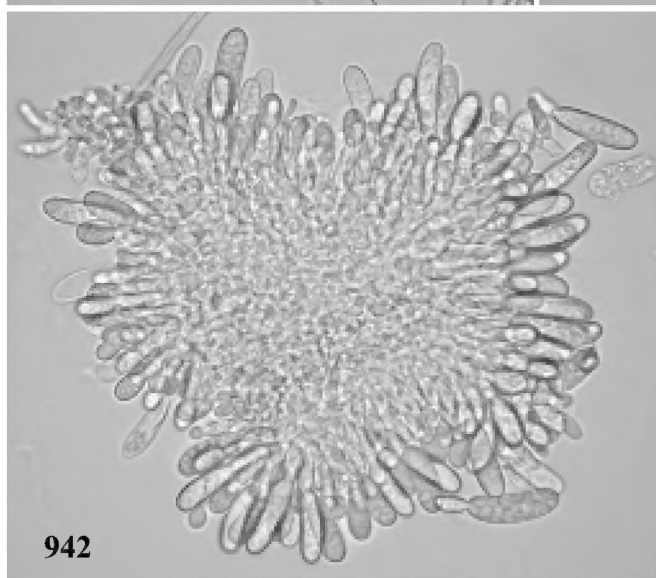
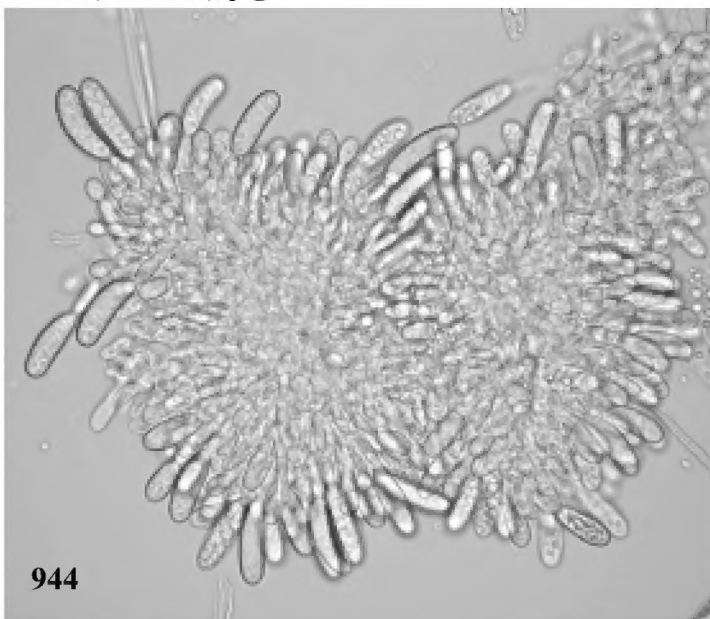
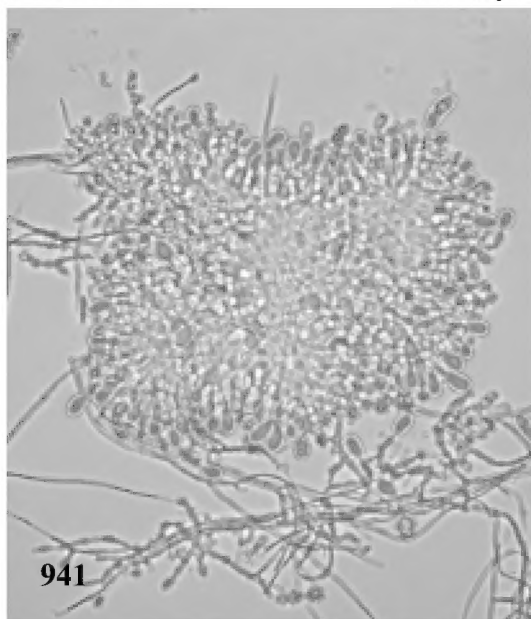
945, 946 = Parts of sporodochia.

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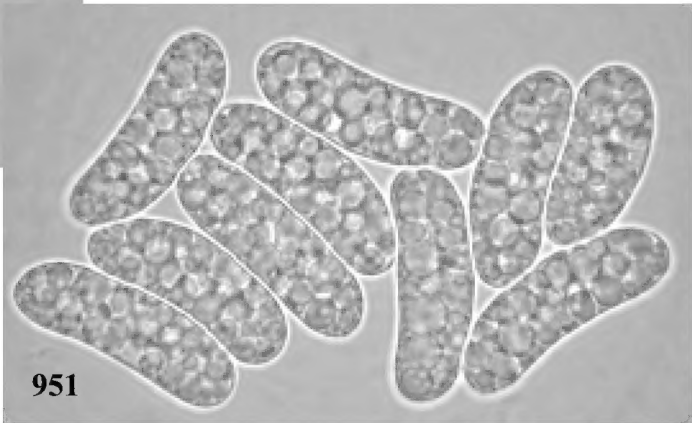
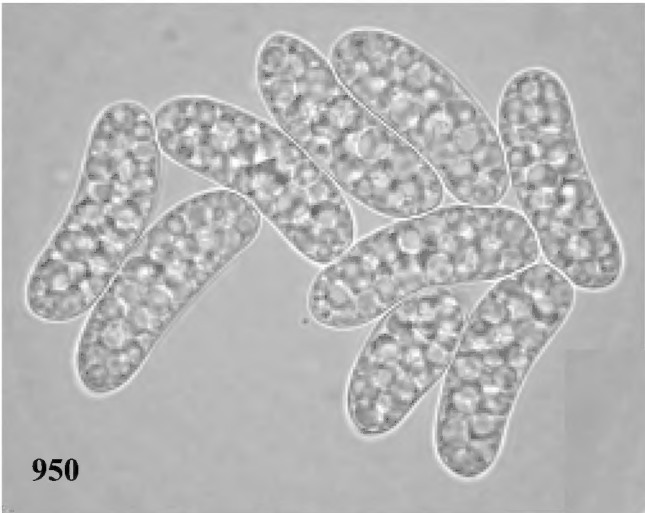
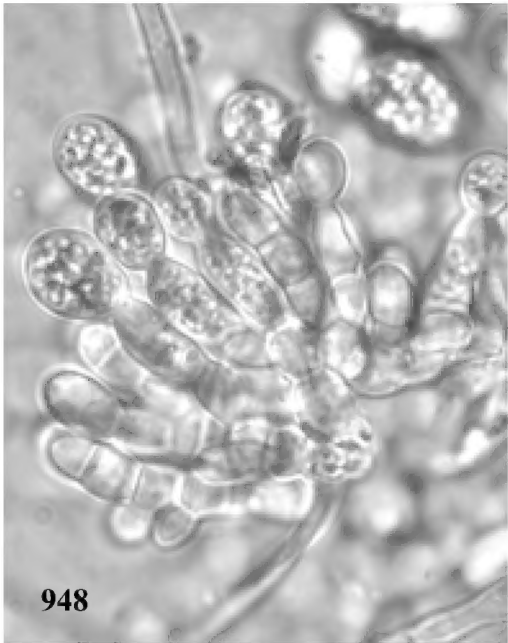
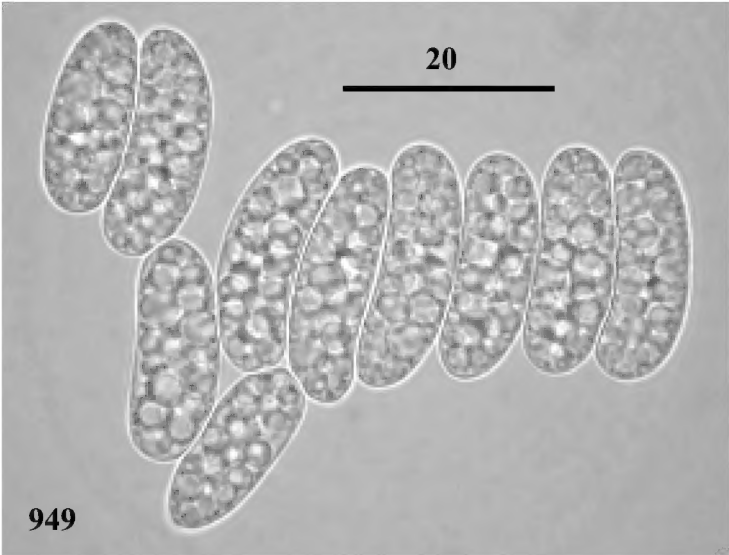
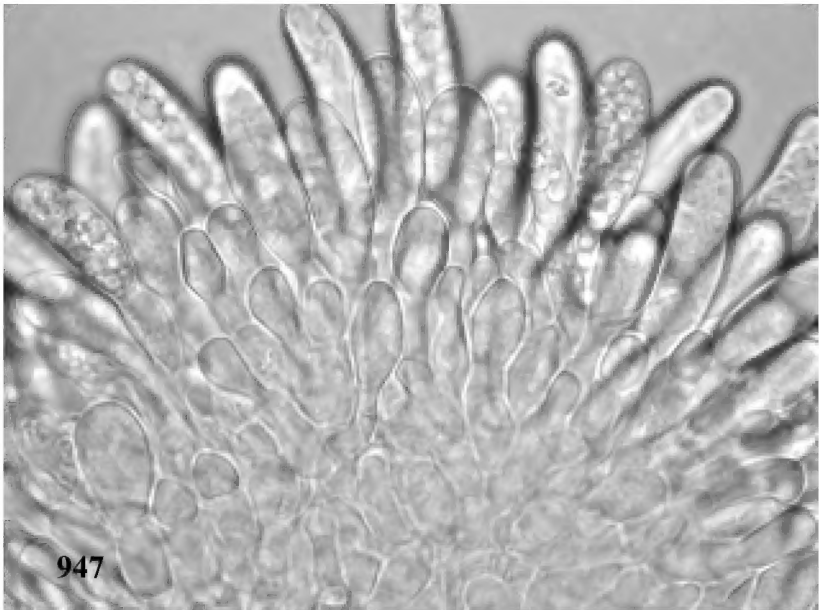
947, 948 = Parts of sporodochia.

949, 950, 951 = Conidia.









**1339 *Colletotrichum sinuatosetiferum*** Matsushima (1996), Mats. Myc. Mem. **9**, p. 6, no. 1251.

**Descr** Coloniae in b/c-medio et CMA diffusae, hyphis aeriis sparsis, albae. Sporodochia superficialia, dissita ad interdum confluentia, pulvinata, parva, aspectu apicali plusminusve circularia, 17.5-50  $\mu$  in diam., cum vel sine setis sinuatis characteristicis; stromata basalia pseudoparenchymatica pallide fusca; conidiophora generatim deficientia, ubi praesentia cylindrica brevia ex externis cellulis stromatis orta; cellulae conidiogenae ex externis cellulis stromatis directe ortae vel ad apicem conidiophori terminaliter integratae, cylindricae, rectae vel curvae, 8-15  $\mu$  longae, 3.5-4  $\mu$  latae, apice angustatae, enteroblasticae-phialidicae, ad orem parietibus periclinalibus leniter spissescens. Conidia hyalina, globosa 9.5-12  $\mu$  diam. ad oblonga 13.5-17.5 x 8.5-12.5  $\mu$ , interdum obovoidea ad pyriformia 13-20 x 8.5-12.5  $\mu$ , aliquando superficie verruculis brunneis globoideis, in guttam pallide brunneam super sporodochiis lecta.

**Hab** MFC-21027. E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Akame-keikoku , Mie Pref., Japan; July 1999.

**Mem** In cultures of MFC-21027, after repeated transfers, the sporodochia lack characteristic sineous setae, consequently they are difficult to distinguish from degenerated conidiomata of *Tubakia* spp.

**Photo**

page 12

952 = Habit, sporodochia on b/c-medium ( from dried specimen ).

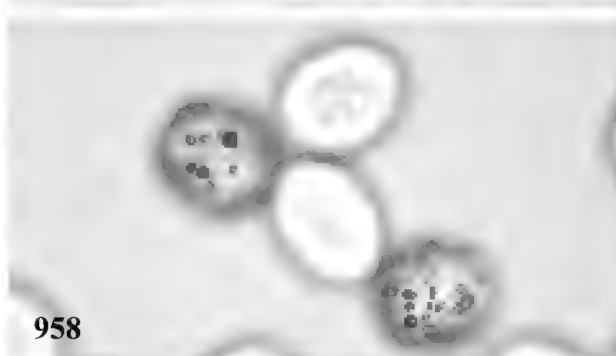
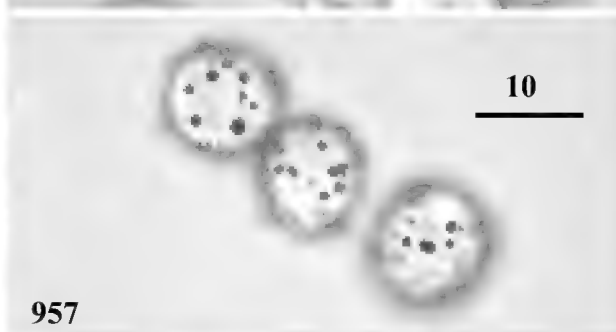
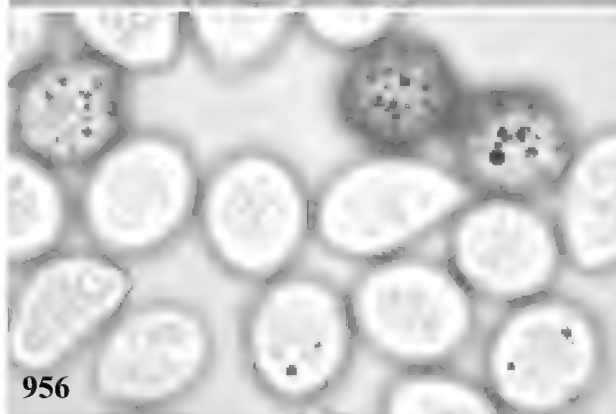
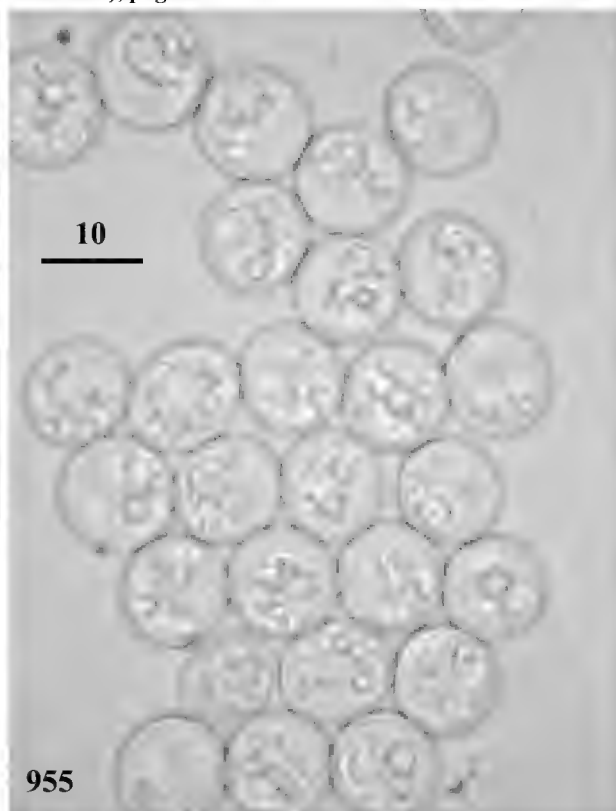
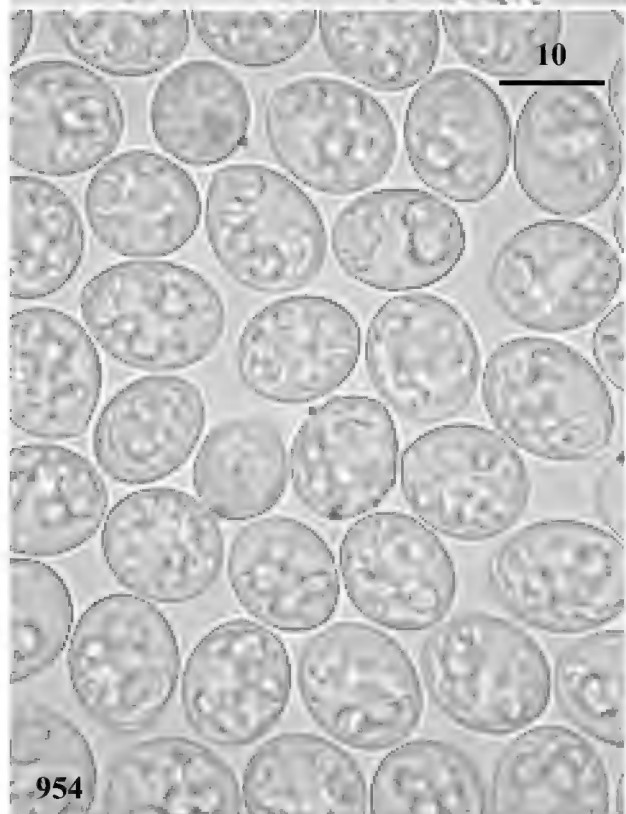
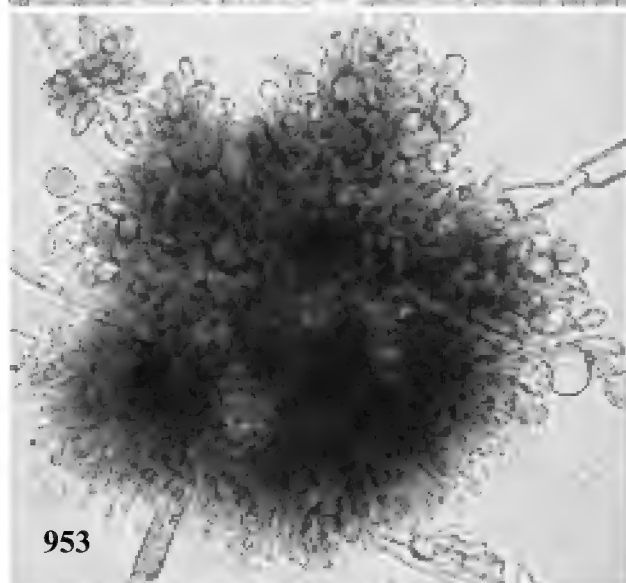
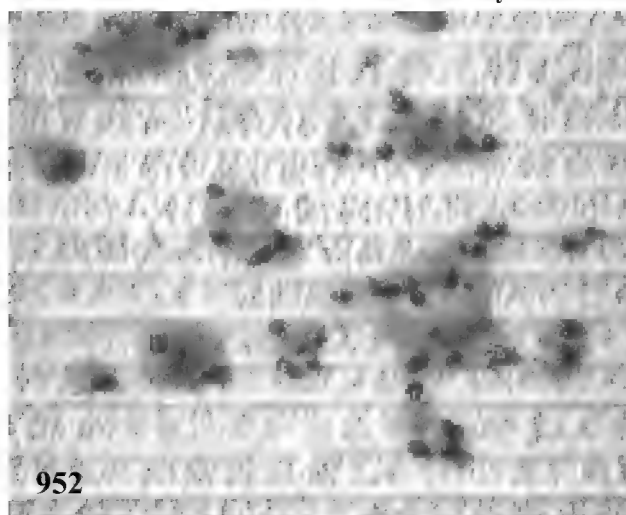
953 = Sporodochium, totally lacking setae, after repeated transfers.

954, 955 = Conidia.

956, 957, 958 = Conidia having superficial dark warts.

page 203 ( color plate )

1772 = Habit, sporodochia on b/c-medium ( from dried specimen ).



**1340 *Cryptocline sphaerospora* anam. sp. nov.**

**Descr** Coloniae in CMA tardissime crescentes, coactae, pallide brunneae. Hyphae vegetativae ramosae septatae 0.8-6  $\mu$  latae, tenui- ad crassitunicatae, laeves, hyalinae ad pallide brunneae. Conidiomata sporodochia, pulvinata ad disciformia, dissita ad gregaria, aspectu apicali plusminusve circularia, magnitudine variabilia, 180-800  $\mu$  in diam., tantam in PDA-inoculis vel circum PDA-inoculas formata: stroma basali pseudoparenchymaticum, brunneum, nec setis nec hyphis specialibus; conidiophora adsunt vel desunt, ubi praesentia cylindrica breviter subhyalina sursum hyalina: cellulae conidiogenae ex extimis cellulis pseudoparenchymaticis directe oriundae vel integratae vel discretae in conidiophora cylindrica breviter, cylindricae ad ampulliformes, in isdem cylindricis 8-25 x 2.5-3.5  $\mu$ , in isdem ampulliformibus parte inferiore usque ad 5.5  $\mu$  latae ad apicem leviter angustatae ad 2.0-3.0  $\mu$ ; apice tribus modis ontogeneae, (1) enteroblasticae-phialidicae, ad orem parietibus periclinalibus spissiscentibus, (2) interdum per percurrentes proliferationes collis cylindricis annellatis 2-2.4  $\mu$  latis et usque ad 8  $\mu$  longis, (3) combinatione ambabus modorum. Conidia praecipue globosa, 8-10  $\mu$  in diam. vel usque ad 12  $\mu$  longa, basi minute conico-truncata 1.0-1.5  $\mu$  lata, hyalina, crenea ad pallide luteolo-brunnea mucosa in massa. Teleomorphosem non vide.

Coloniae in PDA tardissime crescentes, coactae, pallide brunneolae, steriles, reverso atrobunneae; pigmentum brunneum in agarum diffusum. Hyphae vegetativae irregulares, ramosae septatae, 2-11  $\mu$  latae, frequenter ad septa constrictae, e cellulis hyalinis ad brunneis compositae. Teleomorphosem non vide. **Etym.**: *sphaerospora* <="spherical conidia".

**Hab** Folio carioso indet. arboris dicotyledonis; Istanbul, Turkey; Dec. 1999. **Typus**: cultura CMA exsiccata, MFC-21009.

**Ref** H. Sydow & F. Petrak (1924), Ann. Mycol. **22**: 402 (387-409). => *Cryptocline* Petrak, *Cryptocline effusa* sp. nov., p. 402. / *Cryptocline abietina* sp. nov., p. 403. // J. A. von Arx (1957), Revision der zu *Gloeosporium* gestellten Pilze. Verh. K. Ned. Akad. Wet., Afd. Natuurkd., Sect. 2, **51**: 1-153. // G. Morgan-Jones (1971), Canad. J. Bot. **49**: 1921-1929. => *C. betularum* (Ell. & Mart.) v. Arx. // G. Morgan-Jones (1971), Canad. J. Bot. **49**: 1931-1937. => *Cryptocline paradoxa*, *Cryptocline conigena*, and *Cryptocline phacidiella*. // B. C. Sutton (1971), Mycol. Pap. **123**: p. 42. => The nature of the conidiogenous cells in *Cryptocline effusa* (T. sp.) is not fully known, whether they are phialides or annellides. // G. Morgan-Jones et al. (1972), Icones Generum Coelomycetum **1**: p. 15-16. // G. Morgan-Jones (1973), Canad. J. Bot. **51**: 309-325. => *Cryptocline* spp. // B. C. Sutton (1980), The Coelomycetes. C.M.I. => p. 519-521: *Cryptocline*.

**Photo**

page 14

959 = Squashed sporodochium, from CMA. ( by phase contrast )

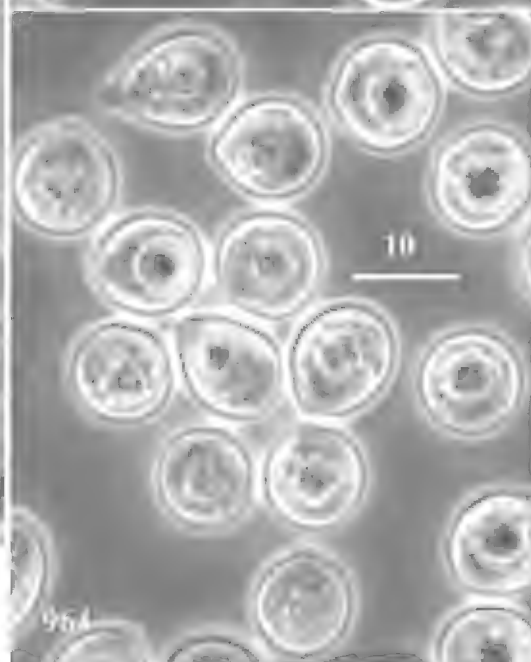
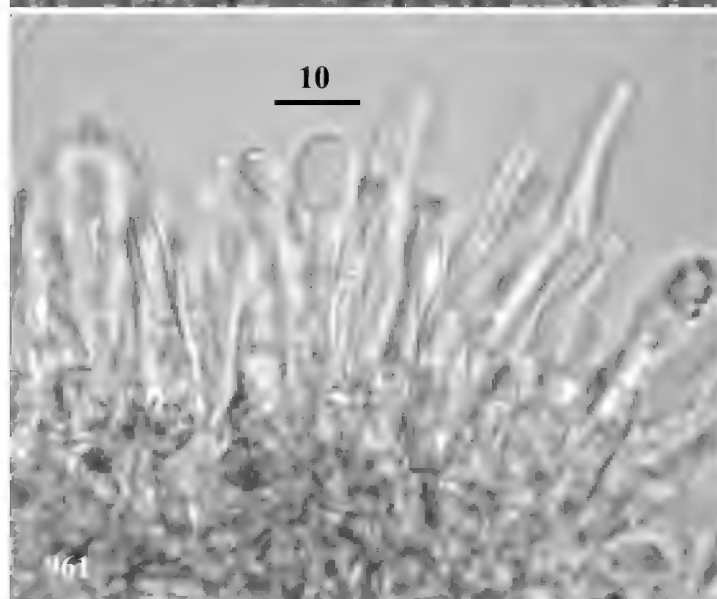
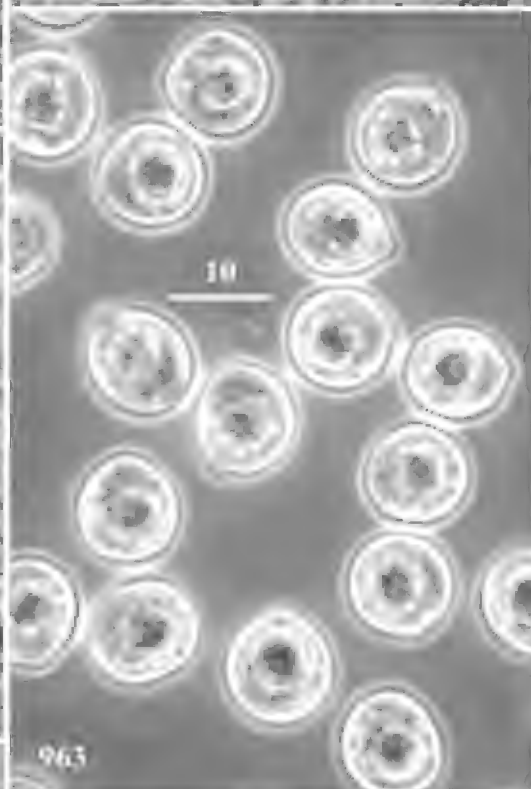
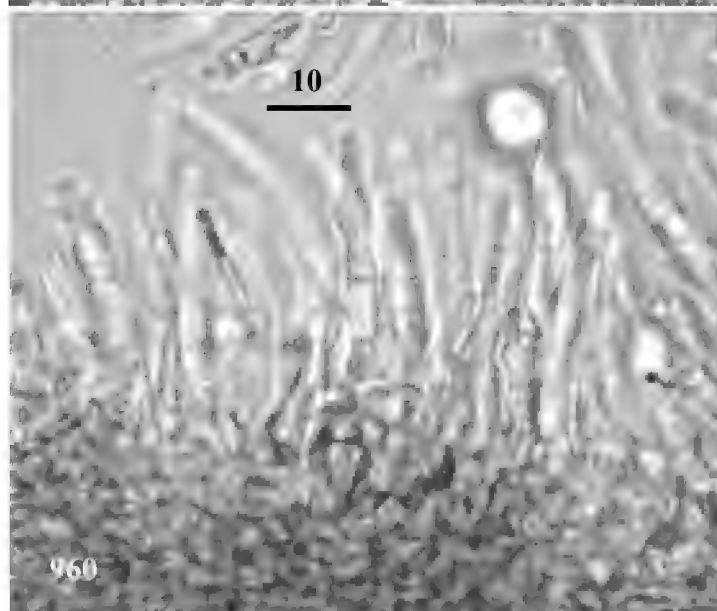
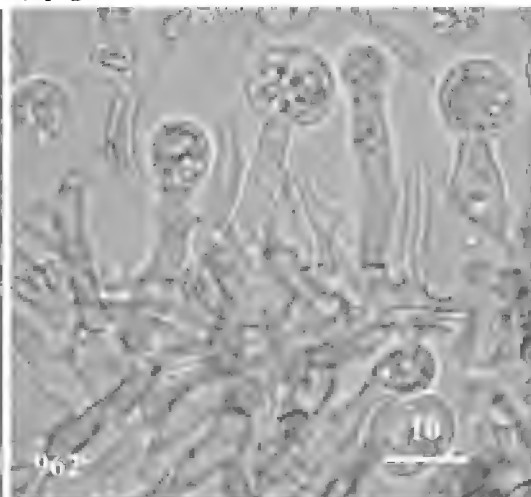
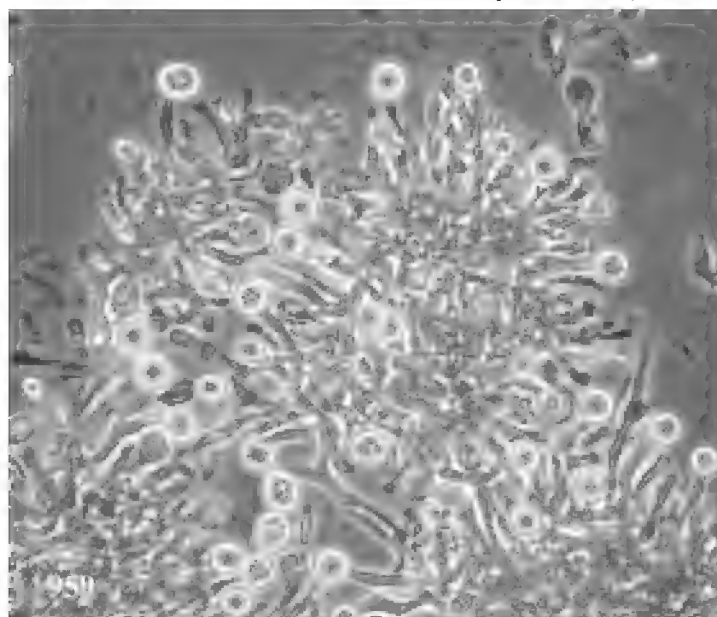
960, 961 = Conidiophores and conidiogenous cells on stromata.

962 = Conidiogenous cells, from a squashed sporodochium.

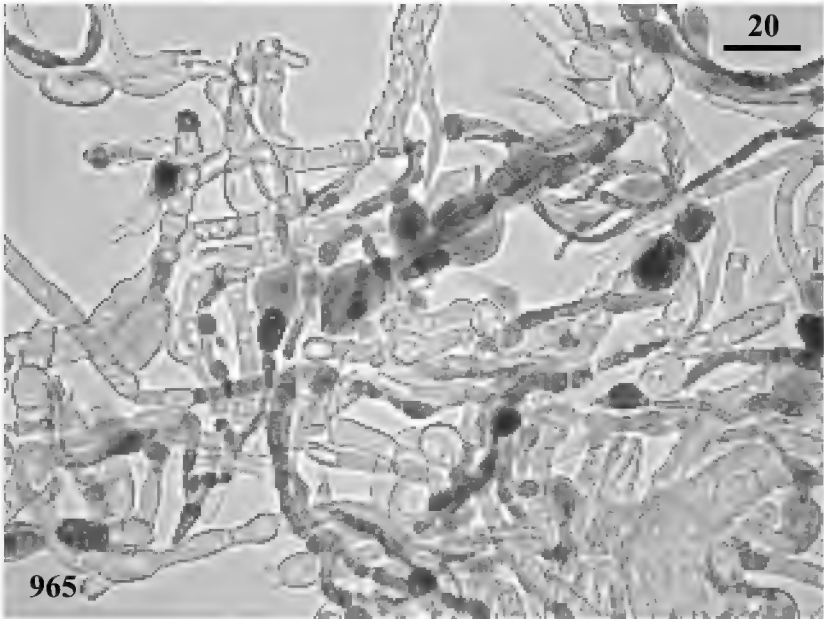
963, 964 = Conidia. ( by phase contrast )

page 15

965 = Mycelium, from PDA.







**1341 *Tubercularia longispora* anam.sp. nov.**

**Descr** Coloniae in b/c-medio effusae, arachnoideae, albae, dispersis conidiomatibus pallide luteis ad pallide aurantiacis. Hyphae vegetativae ramosae septatae, 0.5-5  $\mu$  latae, laeves, hyalinae, albae in massa. Conidiomata sunt sporodochia, quae initio subepidermalia vel ex initio superficialia, postea pulvinata vel hemispherica, aspectu apicali plusminusve circularia vel irregularia, magnitudine variabilia, praecipue 500-1000  $\mu$  diam., interdum usque ad 1500  $\mu$  longa, frequenter confluentia, nec setis nec hyphis specialibus, e stromate basali et conidiophoris dense contiguis composita: stromata pseudoparenchymatosa, initio incolorata, postremo pallide aurantiaca, parte inferiore plusminusve textura angulari, e cellulis angularibus 3.5-8  $\mu$  diam. composita, parte superiore plusminusve textura prismatica ex cellulis cylindricis 2.5-3.5  $\mu$  latis composita. Conidiophora superficie stromatis dense contigua, 0-3 plo ramosa, ramis inter sese adpressis, septata, (50-)75-100(-150)  $\mu$  alta, 3-4  $\mu$  lata, laevia, hyalina. Cellulae conidiogenae ad apices conidiophorum terminaliter integratae vel discretatae, cylindricae, enteroblasticae-phialidicae, laeves, hyalinae, 9-31 x 2.5-3  $\mu$ , apice angustatae, ad orem parietibus periclinalibus spissesscentibus. Conidia cylindrica, interdum inaequilateralia, apice rotundata ad obtusa, basi angustata, unicellularia, 16-35 x 5-7  $\mu$ , laevia, hyalina, super sporodochia in massam mucosam pallide luteam ad pallide aurantiacam oblecta. Additamentum ad sporodochia supra descripta, conidiophoris solitare dispersis. Status microconidialis praesens: multa sporodochia tantum macroconidiis, aliquot sporodochia macroconidiis et microconidiis. Fertiles structurae pro microconidiis similes earundem pro macroconidiis. Microconidia ellipsoidea, continua, 6.5-10(-15) x 3-5  $\mu$ , laevia, hyalina. Teleomorphose non vidi.

Coloniae in CMA effusae arachnoideae albae, sporodochiis dispersis et conidiophoris solitarie separatis abundante dispersis. Teleomorphosis ignota.

Fructificatione b/c-medium quam CMA melius. **Etym:** *longispora* <= "long conidia".

**Hab** Ramunculo carioso indet. arboris dicotyledonis in fundo sylvae dense ; Sukau, Sabah, Malaysia; Nov. 1999. **Typus:** cultura b/c-medio exsiccata, MFC-21064.

**Mem** Habitu similis *Fusario* Link ex Fr. (1821), quo macroconidiis unicellularis differt. A *Colletotricho* Corda et *Cylindrogloeo* Petrak et *Discogloeo* Petrak et *Nalanthamala* Subramanian (1956) aliquantum similis.

**Ref** C. V. Subramanian (1956), J. Indian bot. Soc. **35**: 446-494. // G. Morgan-Jones (1971), Canad. J. Bot. **49**: 1931-1937. // K. A. Seifert (1985), Stud. Mycol. **27**: 1-235. p. 95-129. // K. A. Seifert & G. Okada (1990), Stud. Mycol. **32**: 29-40. // G. J. Samuels et al. (1990), Mem. N. Y. Bot. Gdn. **59**: 1-180, p. 146-147.

**Photo**

page 17

966, 967, 968 = Habit. Sporodochia on b/c-medium.

969 = Part of pseudoparenchymatous stroma.

970, 971 = Conidiophores arising from stromata.

page 18

972, 973 = Phialides.

974, 975, 976 = Macroconidia. ( by phase contrast )

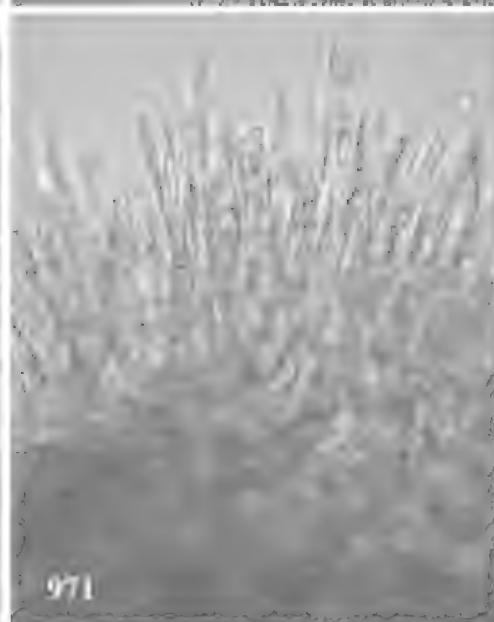
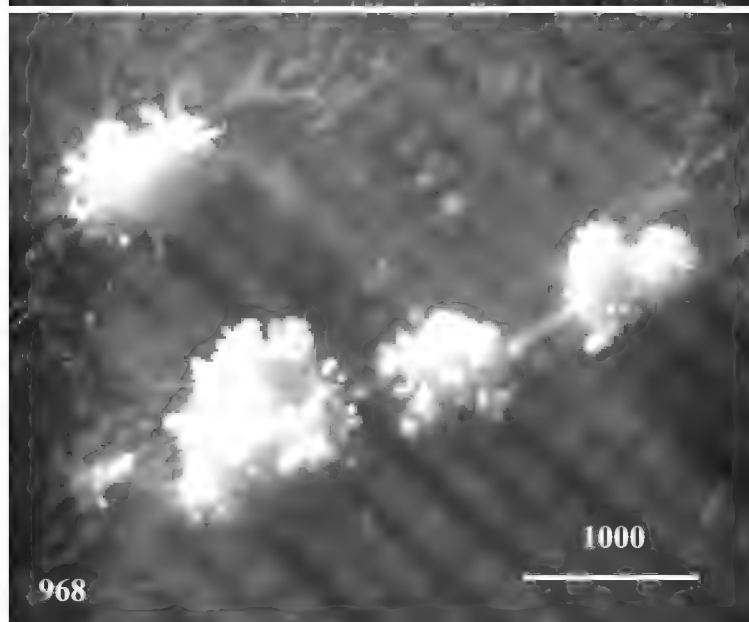
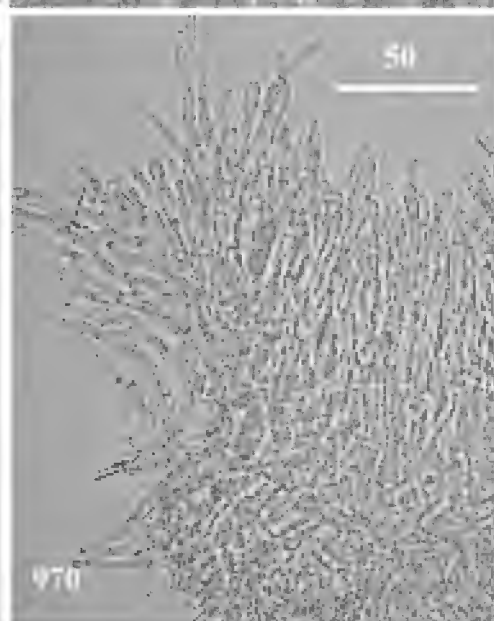
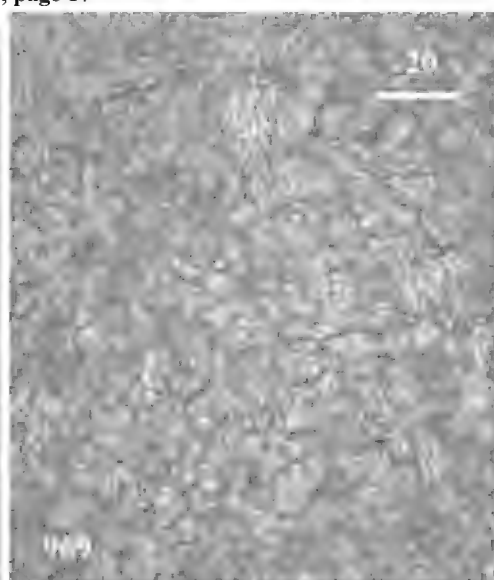
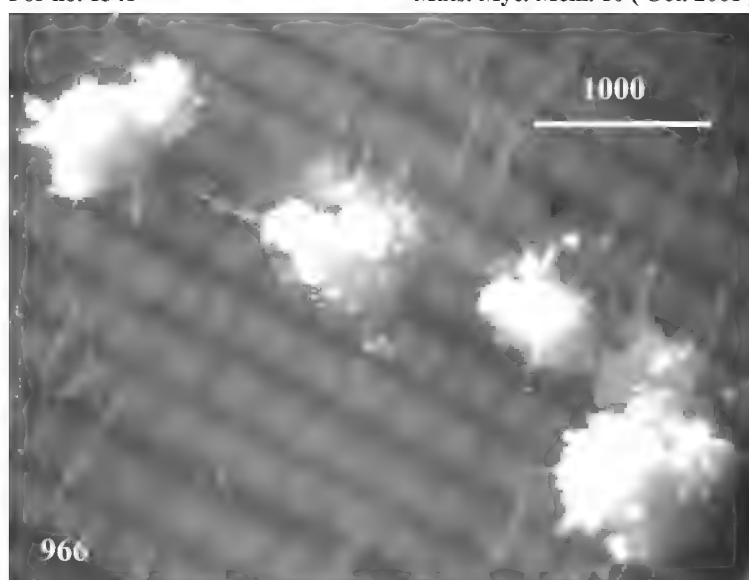
977 = Microconidia. ( by phase contrast )

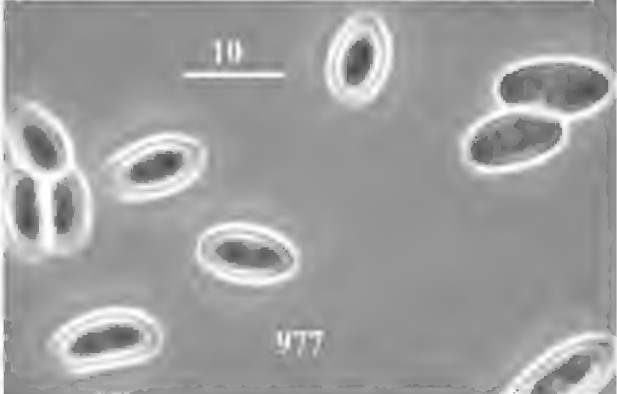
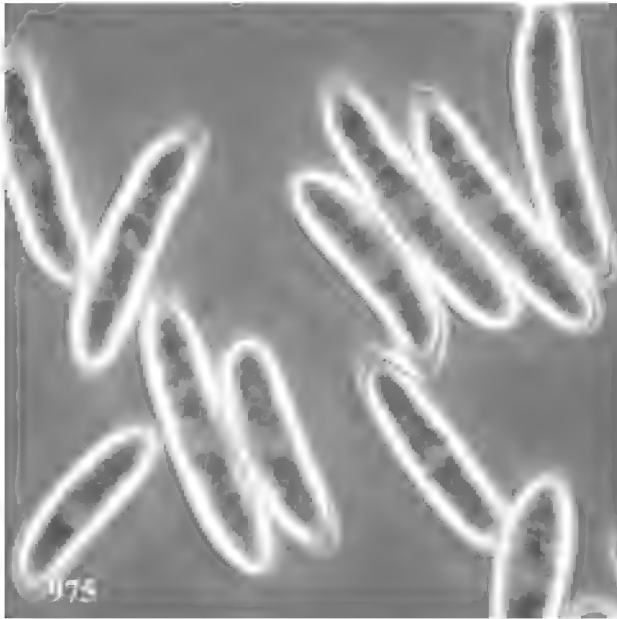
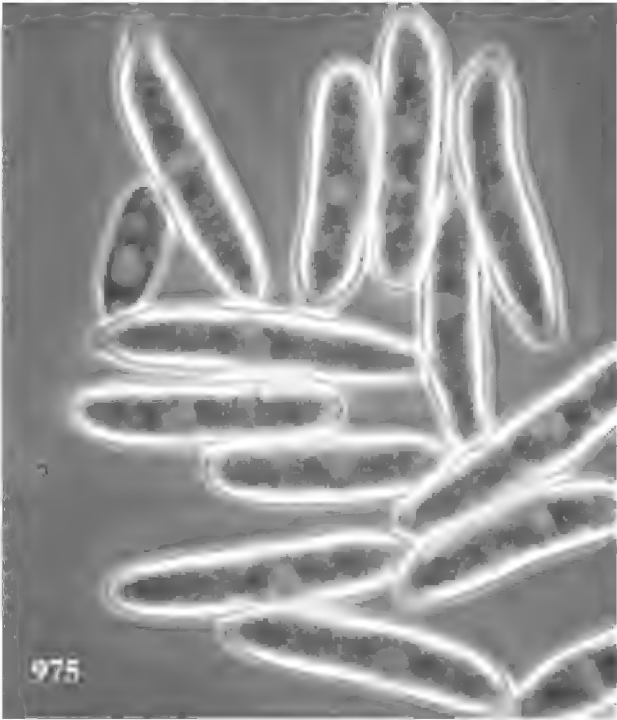
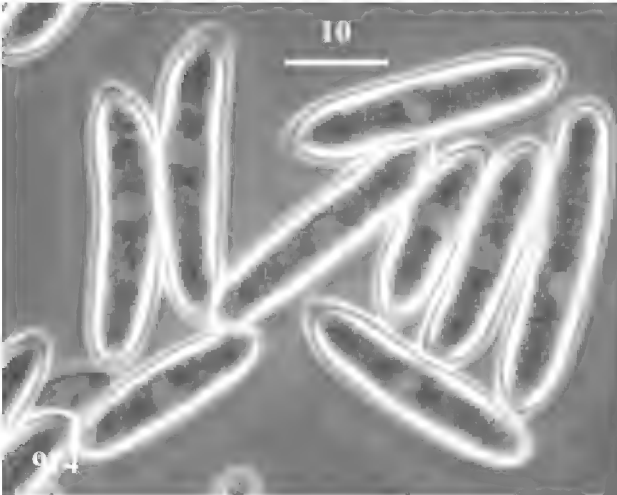
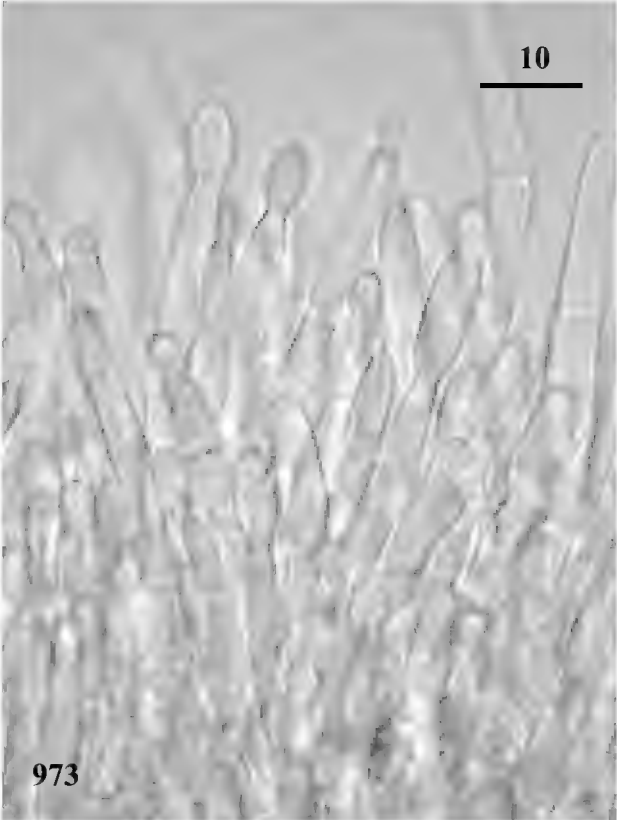
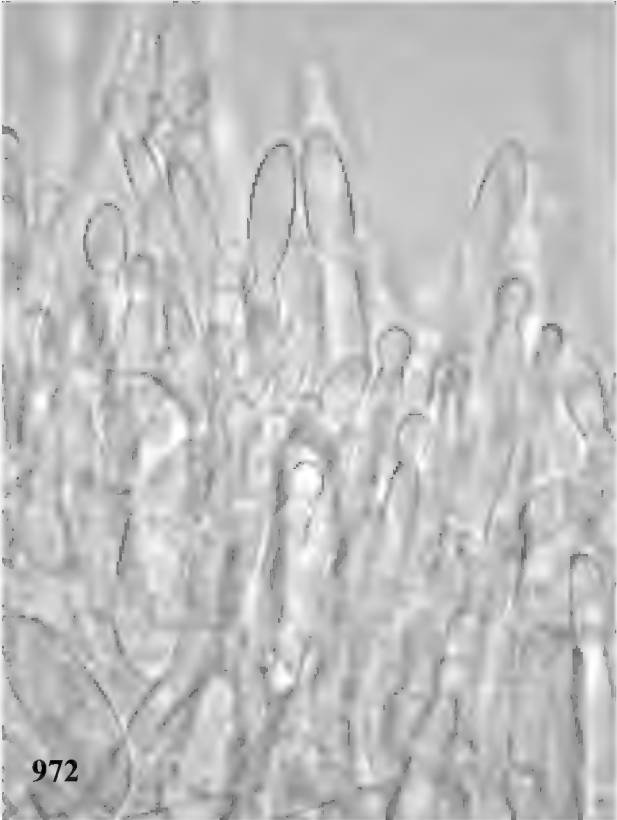
page 203 ( color plate )

1773 = Habit. Sporodochia on b/c-medium.

page 204 ( color plate )

1774, 1775 = Habit. Sporodochia on b/c-medium.





**Dacryoma** Samuels (1988), *Brittonia* **40**: 328.

Species typica: *Dacryoma alba* Samuels, loc. cit. supra.

**Diagnosis emend.**: Conidia ellipsoidea ad falcata ut in macroconidiis *Fusarii*, non- vel multi-septata, hyalina. Characteres alii ut in descriptione originali.

**1342 *Dacryoma discomycetoidea*** anam. sp. nov.

**Descr** Coloniae in PDA effusae albae laxae floccosae, parte centrali conidiomatibus albis aggregatis. Hyphae vegetativae ramosae septatae laeves hyalinae, albae postremo pallidissime brunneolae in massa. Conidiomata cylindrica ad stipitato-cupulata, albae postremo straminea, 500-1000  $\mu$  alta, aspectu apicali circularia oblonga irregulariave, 250-1000  $\mu$  diam. vel usque ad 1500  $\mu$  longa; stipites subcylindrici pseudoparenchymatosi, supra excipulo marginali textura porrecta. Conidiophora apicalem concavam superficiem dense obtegentia, cylindrica, non vel pauciseptata, laevia, hyalina. Cellulae conidiogenae ad conidiophora integratae vel discretiae, cylindricae, 13-31  $\mu$  longae, 3.5-4.5  $\mu$  latae, apice angustatae, ad ores enteroblasticae-phialidicae parietibus periclinalibus manifeste spissesscentibus. Conidia ad instar *Fusarii*, 75-115 x 7.5-9  $\mu$ , 3-5-septata, contento maxime guttulato, laevia, hyalina, pallide crenea ad pallide brunnea mucosa in massa. Teleomorphosis ignota. Fructificatione CMA-medio et b/c-medio mala. **Etym.**: *discomycetoidea* <= the conidiomata are seemingly similar to apothecia of certain Discomycetes.

**Hab** Fronde cariosa palmarum in fundo sylvarum densarum; prope Colonia Angamos, Peru ( located at Peru-Brazil border of the Amazon ); July 1994. **Typus**: cultura PDA exsiccata, MFC-4P057.

**Mem** *Selenosporium*, *Pycnofusarium*, *Nalanthamala* and *Corniculariella* have some similarity to the present species.

**Ref** C. V. Subramanian (1956), J. Indian bot. Soc. **35**: p. 478 ( 446-494 ). => *Nalanthamala madreya* Subramanian gen. et sp. nov. // D. L. Hawksworth & E. Punithalingam (1973), Trans. Br. mycol. Soc. **61**: 63. => *Pycnofusarium* Punithalingam gen. nov.; *Pycnofusarium rusci* sp. nov. // F. DiCosmo (1978), Canad. J. Bot. **56**: 1665-1690. A revision of *Corniculariella*. // T. R. Nag Raj & F. DiCosmo (1978), Icones Generum Coelomycetum **10**: p. 36-37. => *Pycnofusarium* Punithalingam. // G. J. Samuels (1988), *Brittonia* **40**: 306-331. Species of *Nectria* ( Ascomycetes, Hypocreales ) having orange perithecia and colorless, striate ascospores. // V. Holubova-Jechova, W. Gams & H. Nirenberg (1994), *Sydowia* **46**: 247-256. => *Selenosporium* Corda.

#### Photo

page 20

978, 979, 980 = Habit. Conidiomata on PDA.

981 = Section of the upper part of conidioma, showing excipulum marginale in the apical part.

982, 983 = Outermost parts of conidiomatal stalks. ( by phase contrast )

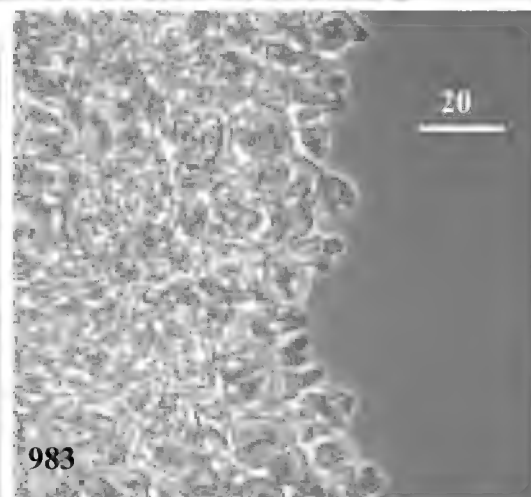
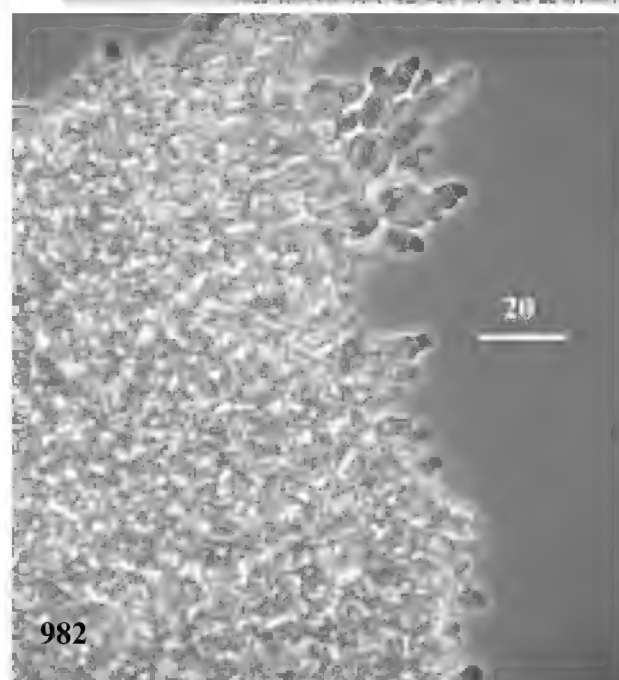
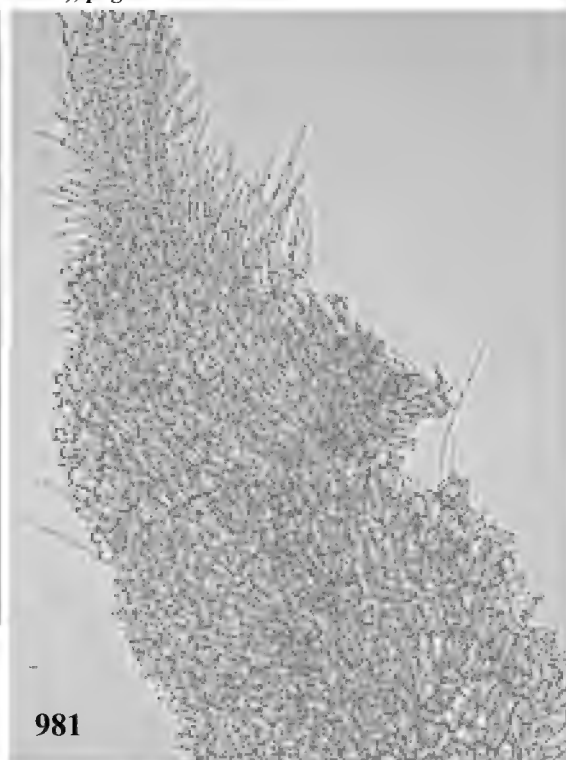
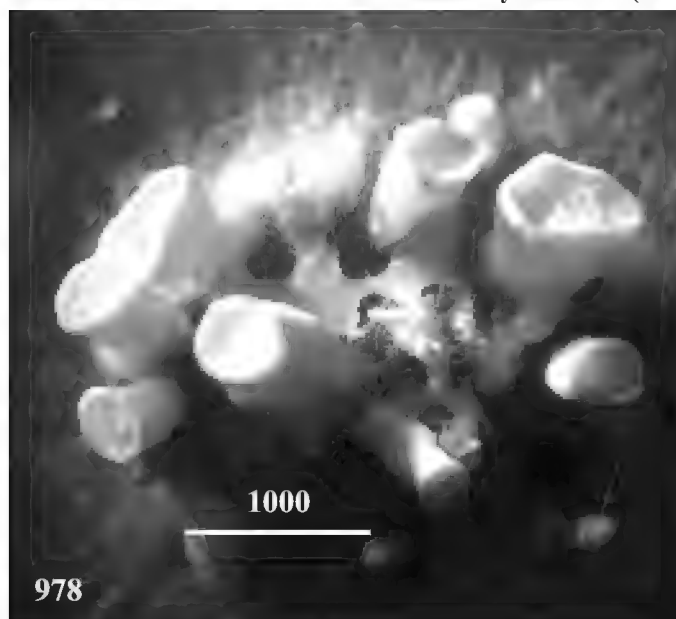
page 21

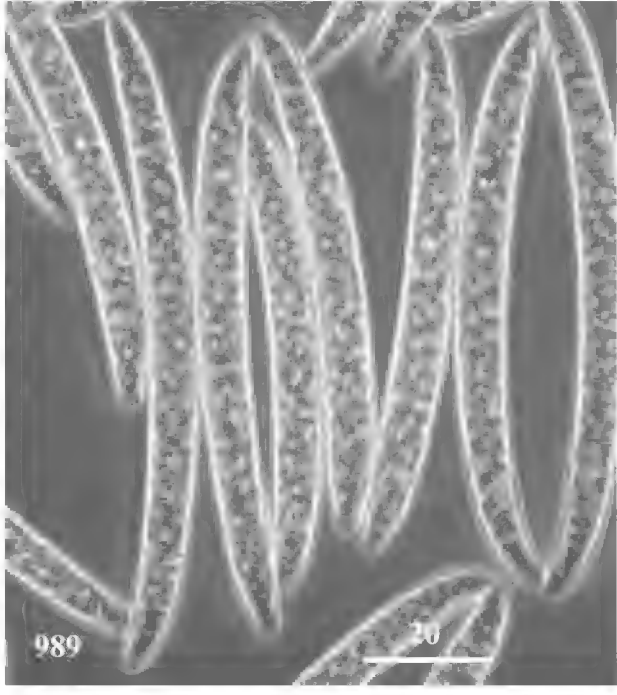
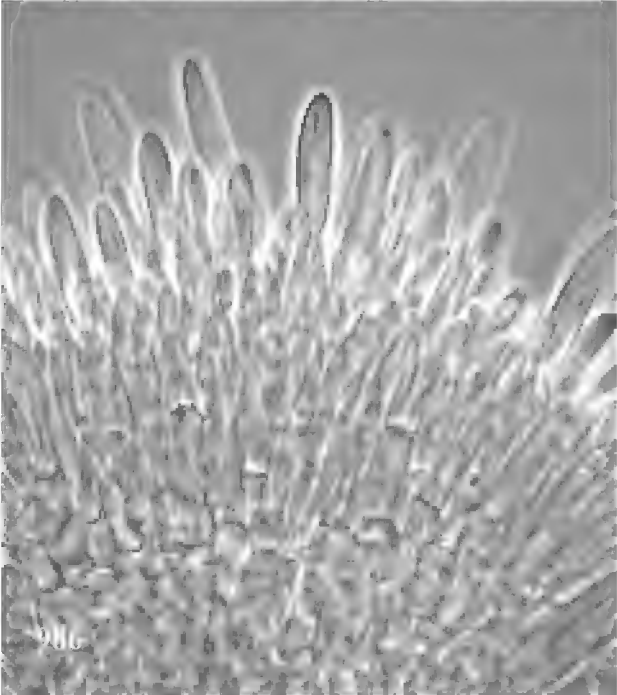
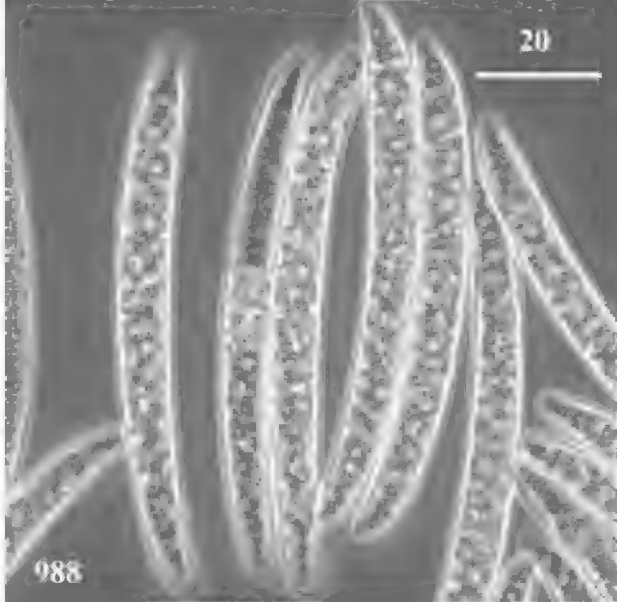
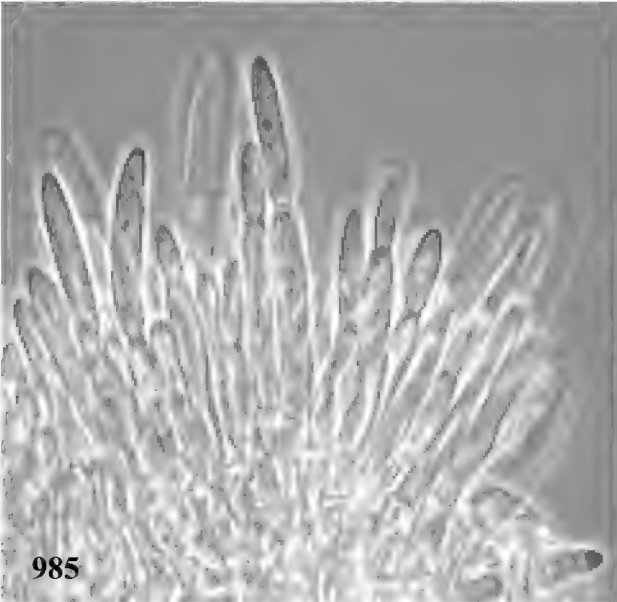
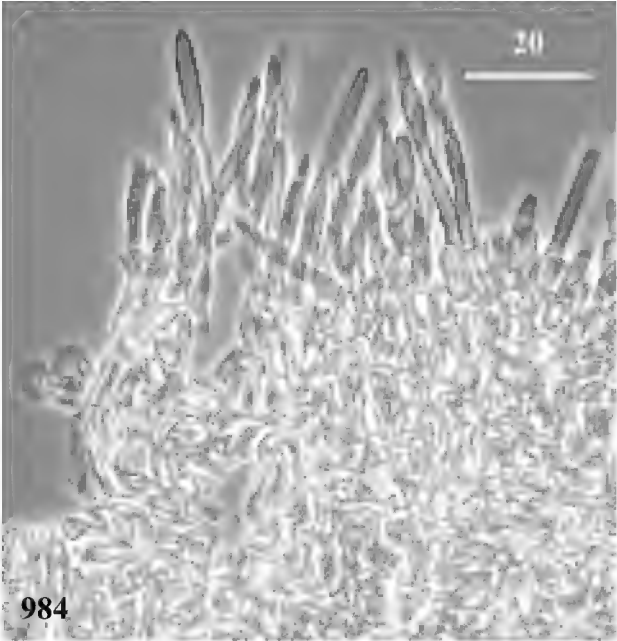
984 = Conidiophores and conidiogenous cells. ( by phase contrast )

985, 986, 987 = Conidiophores and conidiogenous cells. ( by phase contrast )

988, 989 = Conidia. ( by phase contrast )







**1343 *Koorchaloma dimorpha* anam. sp. nov.**

**Descr** Coloniae in CMA diffusae, sporodochiis in area centrali, hyphis aeriis sparsis, fere incoloratae, margine definito. Conidiomata sporodochia, superficialia, tenuiter platelliformia, magnitudine variabilia usque ad c. 1000  $\mu$  diam., e basali stromate et hymenio fertili composita, setifera, nec excipulo marginali nec hyphis albis sterilibus marginalibus; stromata tenuissima plana, textura angulari, ex cellulis angularibus 3-5  $\mu$  diam. composita; setae sporodochiis omnibus dispersae, erectae simplices subulatae, e stromate basali oriundae, 75-140  $\mu$  longae, 4-7-septatae, crassitunicatae, basi ad 10-12  $\mu$  diam. inflatae, supra basim 6-8  $\mu$  latae, sursum angustatae, subapice 2-3  $\mu$  latae, apice apiculatae interdum obtusae, brunneae, frequenter 1-2 cellulis apicalibus pallidioribus. Conidiophora desunt vel interdum adsunt, ubi praesentia brevia cylindrica, e supernis cellulis stromatis oriunda. Cellulae conidiogenae e supernis cellulis stromatis directe oriundae vel terminaliter integratae ad conidiophora brevia, stratis hymenialibus super stromata formatae, laeves, hyalinae, clavatae, 6-12.5  $\mu$  longae, basi 3-4  $\mu$  latae, parte superiore 4.5-5.5  $\mu$  latae, apice perforatae, enteroblasticae, ad orem parietibus periclinalibus leviter spissescens. Conidia fusiformia, unicellularia, laevia, duabus guttulis in quaque cellula, (8-)12.5-15.5(-17) x (4.5-)5-5.5 (-6)  $\mu$ , apice appendice infundibuliformi mucosa, basi interdum ( plusminusve 40 % ) appendice simili sed minus distincta, incolorata, aurantiaca mucosa in massa.

Additamento varie degeneratis structuris: (a) parviora sporodochia sine setis; (b) dissita vel gregaria conidiophora vel phialides e hyphis vegetativis repentibus ( non e stromate ), cum vel sine setis; (c) solitariae gregariae setae e hyphis vegetativis, sine consortione conidiophorum vel phialidum.

*Acremonium*-synanamorphosis: inconspicue dispersa. Conidiophora dissita ex hyphis vegetativis repentibus oriunda, cylindrica, simplicia, raro semel ramosa, recta vel sinuosa, interdum percurrenter vel sympodialiter semel proliferata, 16-70  $\mu$  longa, 0-11-septata, basi 2.5-3.5  $\mu$  sursum ad 1.5  $\mu$  angustata, relative crassitunicata, aspectu rigida, apice collo brevi minuto, ad orem parietibus periclinalibus leviter inconspicue spissescens. Conidia fusiformia, 4.5-7(-9) x 3-4.5  $\mu$ , laevia, hyalina, sine appendice. Teleomorphosis ignota. **Etym.**: *dimorpha* <= the species has both *Koorchaloma* and *Acremonium* synanamorph.

**Hab** E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Yomitanson, Okinawa Pref., Japan; Feb. 2000. **Typus**: cultura CMA exsiccata, MFC-21074.

**Ref** C. V. Subramanian (1953), J. Ind. bot. Soc. **32**: 124. => *Koorchaloma*. // B. L. Chona, R. L. Munjal & J. N. Kapoor (1958) [1959], Indian Phytopath. **11**:130-132. => *Koorchalomella oryzae* gen. et sp. nov. // T. R. Nag Raj (1984). Mycotaxon **19**: 167-212. => The following genera are similar in general morphology especially in having conidia with mucoid appendages, but they differ each other in the following points: *Koorchaloma* Subramanian (1953) = sporodochia with dark setae but lacking white fringe hairs, conidia salmon- to orange-coloured in mass / *Starkeyomyces* Agnihotrudu (1956) = sporodochia without setae or with white fringe hairs, conidia deep green in mass / *Lomachashaka* Subramanian (1956) = sporodochia without dark setae, with white fringe hairs, conidia light green in mass / *Koorchalomella* = sporodochial without dark setae, with white fringe hairs, conidia bright orange to pinkish coloured in mass. Five species of *Koorchaloma* are described and illustrated: *Koorchaloma bambusae* Nag Raj = cellulae conidiogenae 6-11 x 2.5-3.5(-4)  $\mu$  ( av. 8 x 3 ); conidia 9-13 x 3.5-5  $\mu$  ( av. 11.4 x 4.2 ) / *Koorchaloma jamaicense* Nag Raj = cellulae conidiogenae 6-11(-12) x 2.5-3  $\mu$ ; conidia 12-19 x 2.5-3.5  $\mu$  ( av. 16 x 3 ) / *Koorchaloma madreya* Subramanian ( Type sp. ) = cellulae conidiogenae 11-20 x 3-4  $\mu$  ( av. 15.8 x 3.5 ), conidia 11-17 x 3-4.5  $\mu$  ( av. 14 x 3.8 ) / *Koorchaloma occidentalis* Nag Raj = cellulae conidiogenae 7-15 x 2-3  $\mu$ , conidia 9-15 x 2.5-3.5  $\mu$  ( av. 12 x 3 ) / *Koorchaloma okamurae* Hino & Katumoto = cellulae conidiogenae 11-19(-25) x 2.5-3.5  $\mu$  ( av. 15.5 x 3 ), conidia 10-14 x 3.5-5  $\mu$  ( av. 12 x 4.2 ). Teleomorphs reported for two species of *Koorchaloma* are disposed in *Kananascus* gen. nov. // T. R. Nag Raj (1993), Coelomycetous anamorphs with appendage bearing conidia. p. 449.

**Photo**

page 23

990 = Sporodochia on CMA. ( most conidia washed away )

991 = Sporodochium in top view, showing dense apices of conidiogenous cells.

992 = Squashed sporodochium, showing basal parts of sporodochial setae.

993, 994 = Sporodochia in side view.

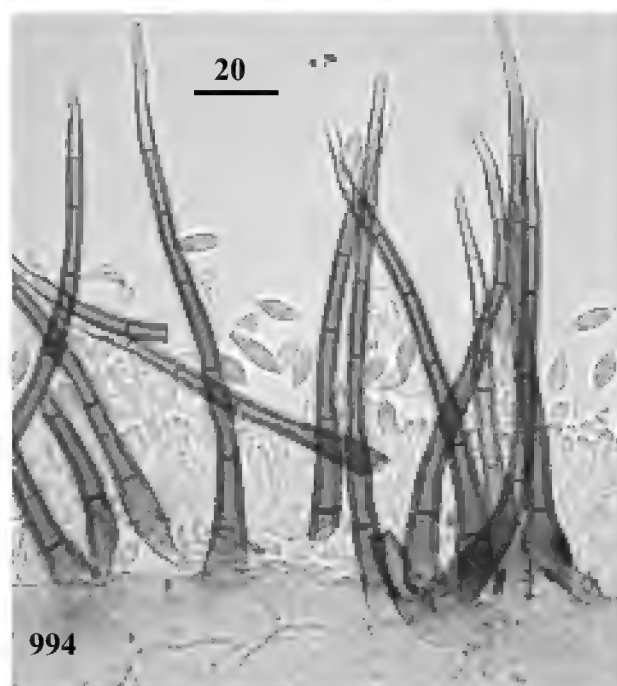
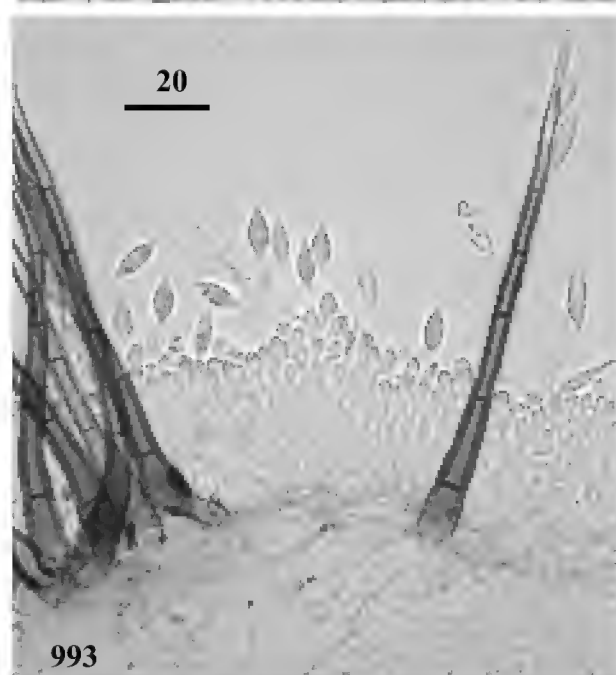
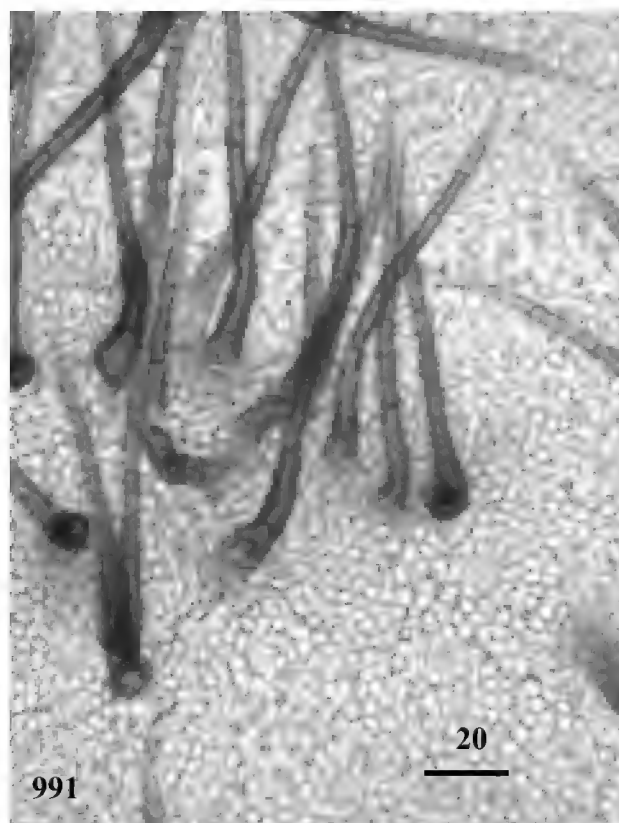
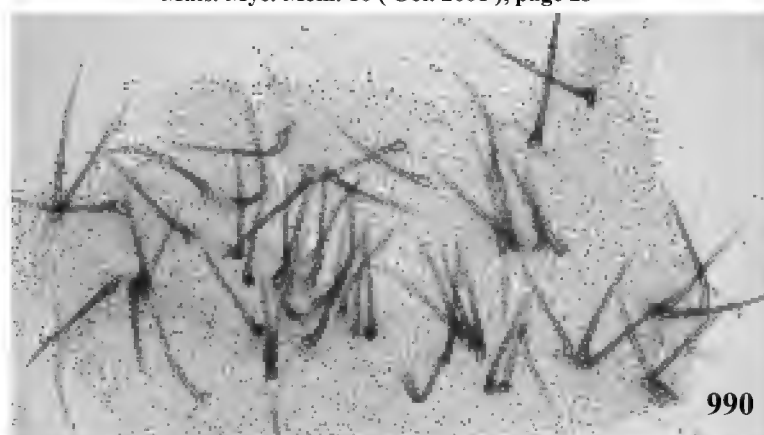
page 24

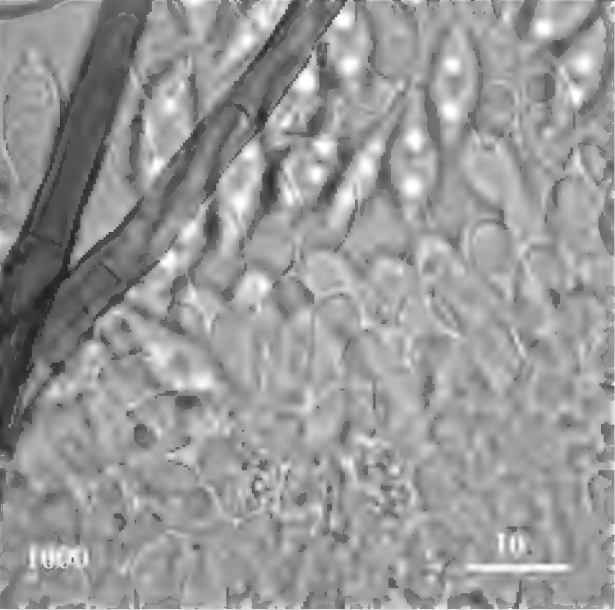
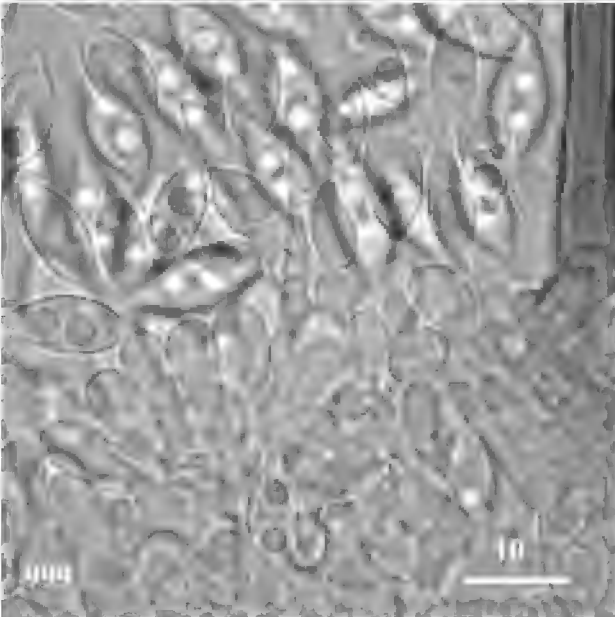
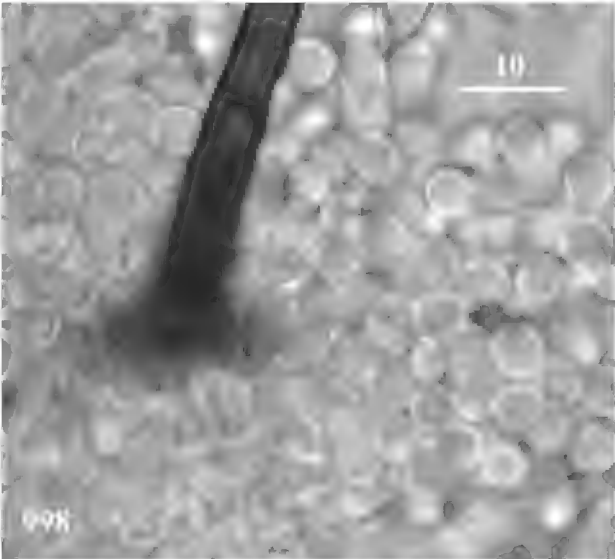
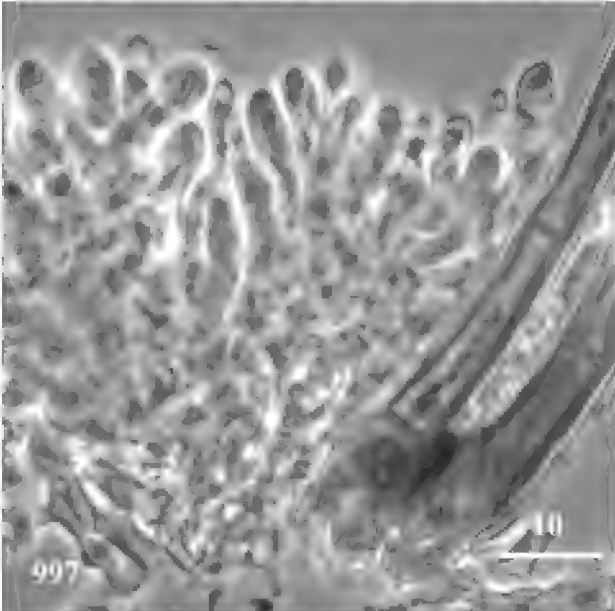
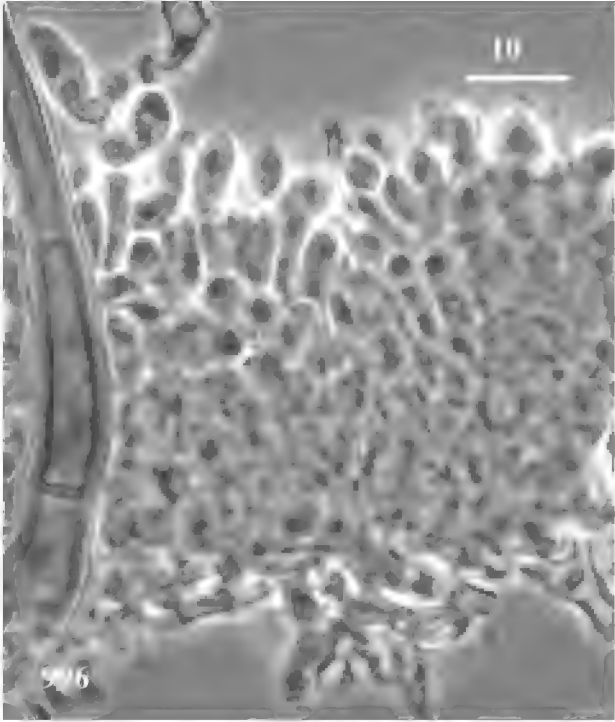
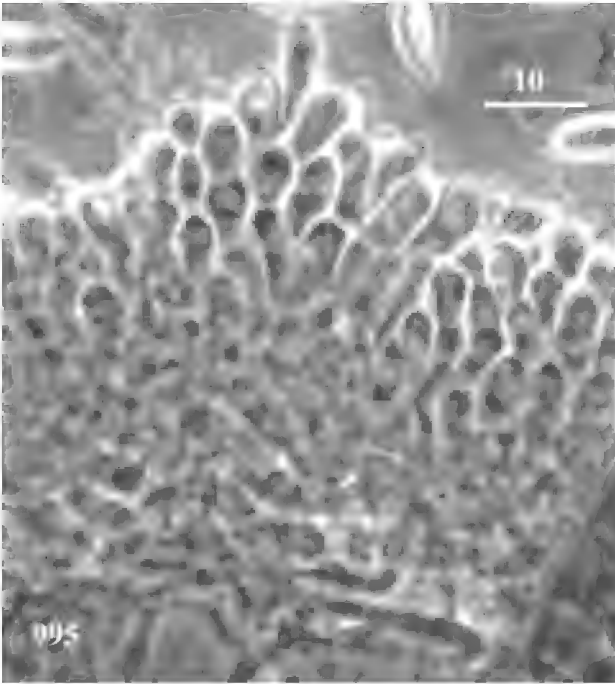
995, 996, 997, 998, 999, 1000 = Parts of Conidiomata. ( 995, 996, 997 by phase contrast )

page 25

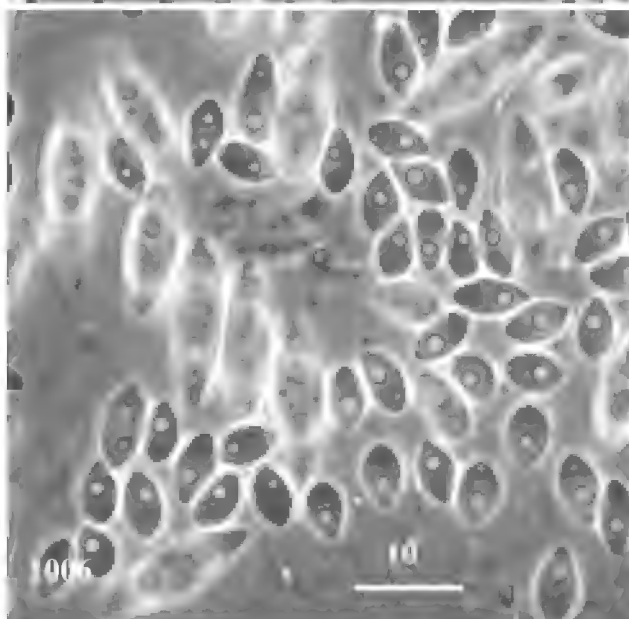
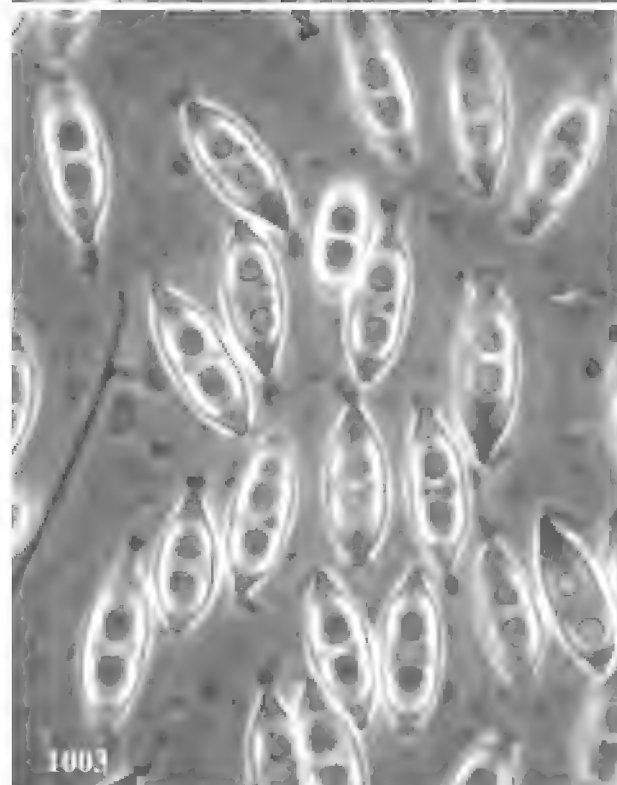
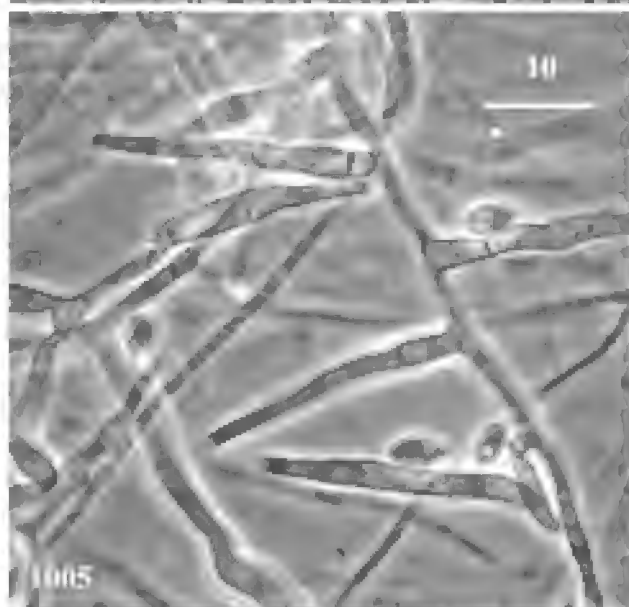
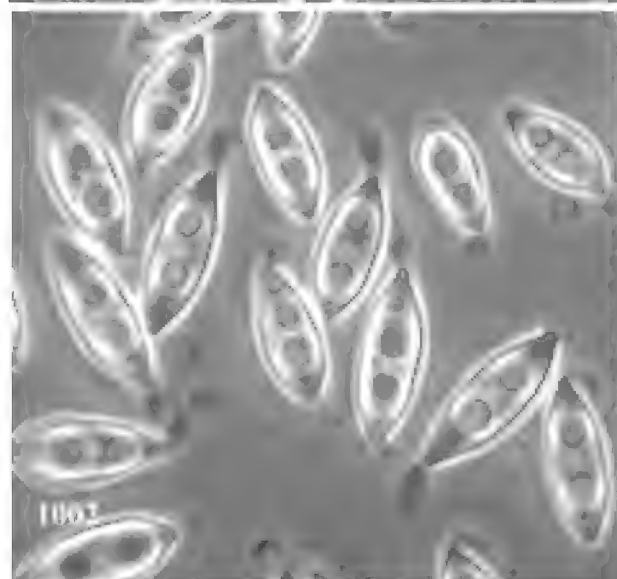
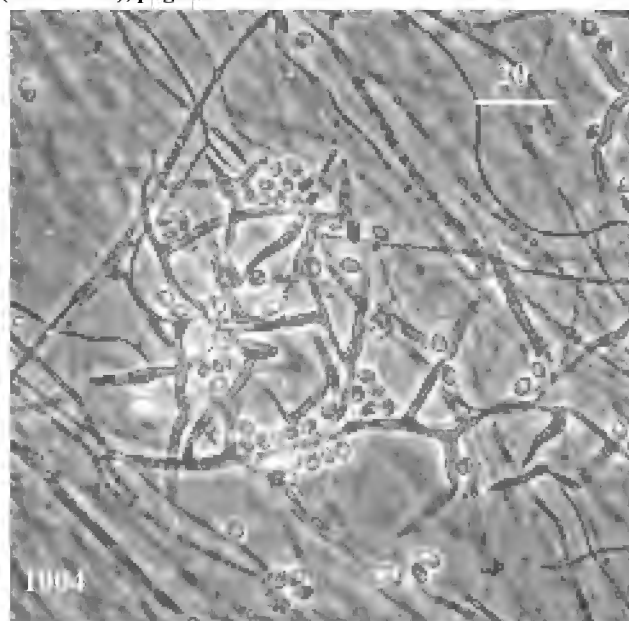
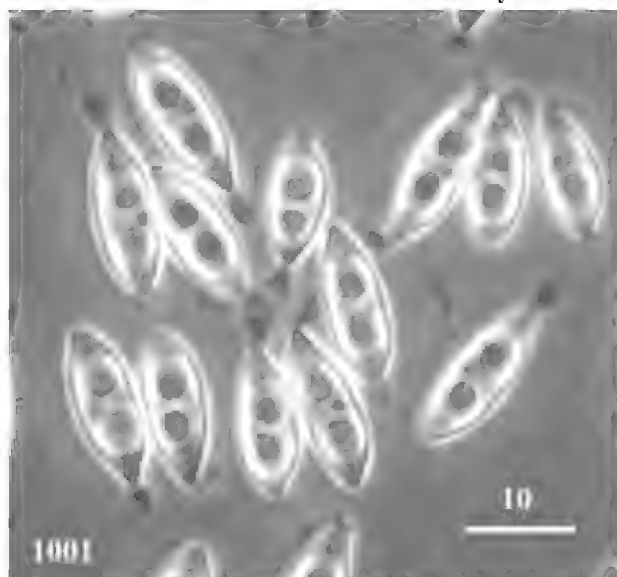
1001, 1002, 1003 = Conidia. ( by phase contrast )

1004, 1005 = *Acremonium*-state on CMA. ( by phase contrast )1006 = Conidia of *Acremonium*-state. ( by phase contrast )









***Paramenisporopsis* anam. gen. nov.**

Conidiomata e synnemata incolorata et setis fuscis composita. Synnemata cylindrica, infra e hyphis rectis parallelibus connatis septatis hyalinis composita; capitulo hyphae synnematis liberascens, non vel parce ramosae, in cellulis conidiogenis terminatae; cellulae conidiogenae cylindricae rectae apice angustatae, ad orem enteroblasticae-phialidicae parietibus periclinalibus spissescens. Setae usque ad aliquot per synnema adsunt, e hyphis synnematis prope basim sursum ortae, simplices rectae septatae crassitunicatae rigidae laeves atrobrunneae, apice obtusae vel apiculatae. Conidia cylindro-ellipsoidea, 1-septata, laevia, utrinque unisetulata, pallide fusca, fusca mucosa in massa; setulae simplices vel ramosae, setulae basales exogene oriundae. Similis *Menisporopsi* Hughes (1952), qua una seta fasciculo conidiophorum suffulta, sed in *Paramenisporopsi* setae sunt tantum accessoriae ad fasciculum conidiophorum. **Etym:** *Paramenisporopsis* <= Similar to *Menisporopsis* but distinct. Species typica postero sectione.

**1344 *Paramenisporopsis undulosepulata* anam. sp. nov.**

**Descr** Coloniae in b/c-medio lente diffusae, hyphis aeriis sparsis, synnematibus aggregatis atrofusci dispersis. Synnemata praecipue radiate dense aggregata ut in uno conidiomate, unumquidque e fasciculo conidiophorum et setis fuscis compositum. Fasciculi conidiophorum e stipite hyalino et capitulo atrofusco ( ob massam conidiorum ) compositi, magnitudine variabiles, 60-250  $\mu$  alti 5-55  $\mu$  lati; stipites cylindrici hyalini, e hyphis parallelibus connatis rectis septatis 1.5-2.5  $\mu$  latis crassitunicatis ( c. 0.4  $\mu$  ) compositi; in capitulo hyphae synnematis liberascens simplices vel parce ramosae, inter sese adpressae non vel leviter extrinsecus flexae, septatae 1.0-2.0  $\mu$  latae tenuitunicatae laeves hyalinae in cellulis conidiogenis terminatae; cellulae conidiogenae cylindricae rectae laeves 16-30  $\mu$  longae 1-2  $\mu$  latae, apice angustatae enteroblasticae-phialidicae, ad orem parietibus periclinalibus spissescens. Setae generatim usque ad aliquot per synnema adsunt, e hyphis synnematis prope basim sursum ortae, simplices rectae septatae crassitunicatae rigidae laeves atrobrunneae 115-225  $\mu$  longae 2.5-3  $\mu$  latae apice obtusae vel apiculatae. Conidia cylindro-ellipsoidea, frequenter inaequilateralia, 1-septata, 7-12 x 2.5-3.2  $\mu$ , utrinque unisetulata, setula basali exsogena, laevia, pallide fusca, fusca mucosa in massa; setulae sinuolatae, simplices vel semel ( raro bis ) ramosae, 2.5-10(-15)  $\mu$  longae, latitudine variabiles 0.2-0.5  $\mu$  latae.

Coloniae in CMA lente crescentes, pallide brunneolae, hyphis aeriis sparsis, margine definito, synnematibus atrofusci aggregatis in area centrali et extrorsus in circulis concentricis. **Etym.:** *undulosepulata* <= conidia with "wavy setulae".

**Hab** carioso ramunculo indet. arboris dicotyledonis in fundo sylvae; Kobe Municipal Arboretum, Kobe, Japan; March 2000. **Typus:** cultura b/c-medio exsiccata, MFC-21065.

**Photo**

page 27

1007, 1008 = Habit. Conidioma on b/c-medium.

1009, 1010, 1011 = Fascicles of synnemata.

1012 = Setae and synnemata. ( squashed )

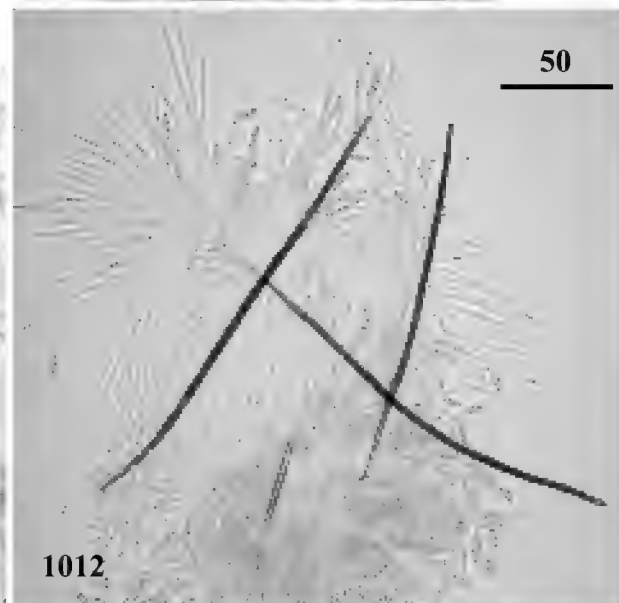
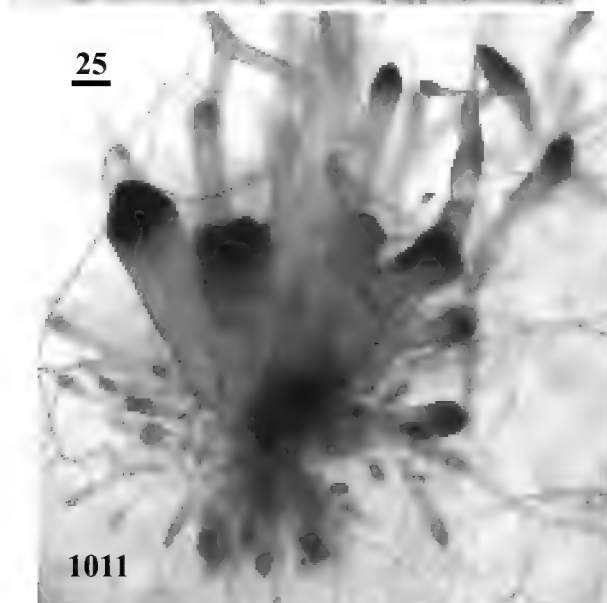
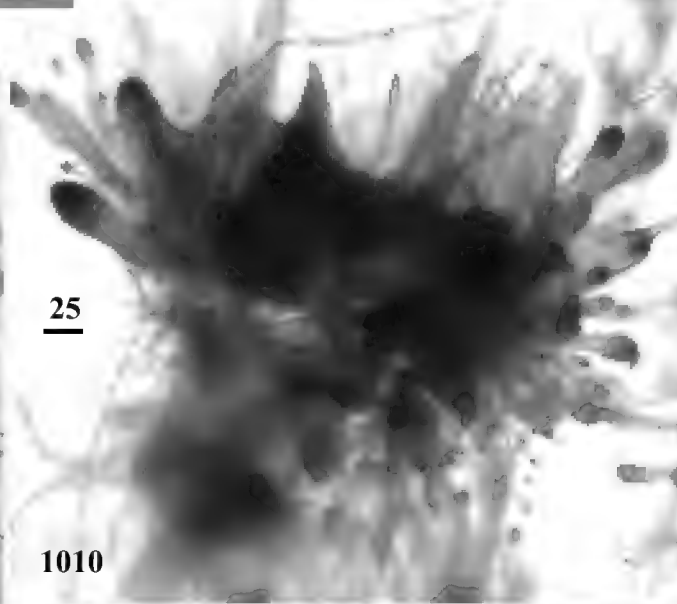
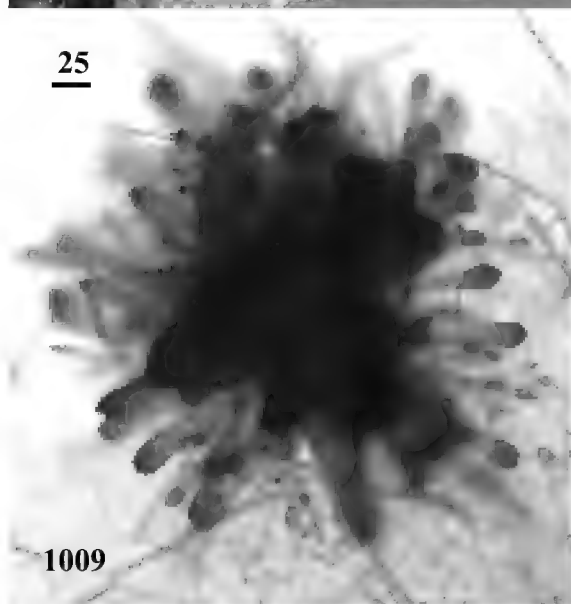
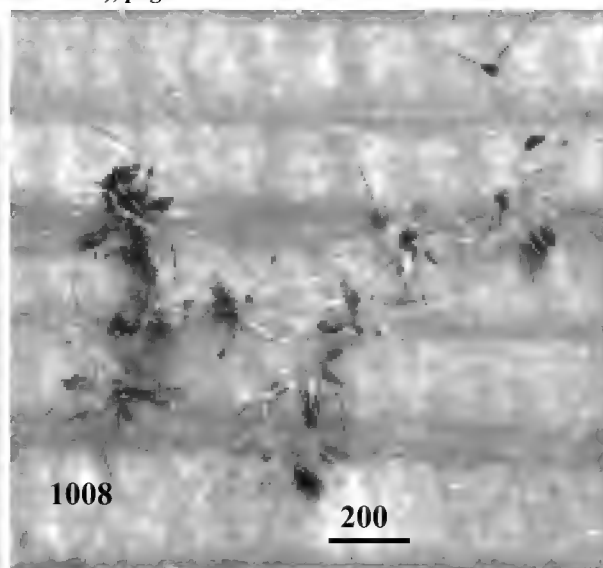
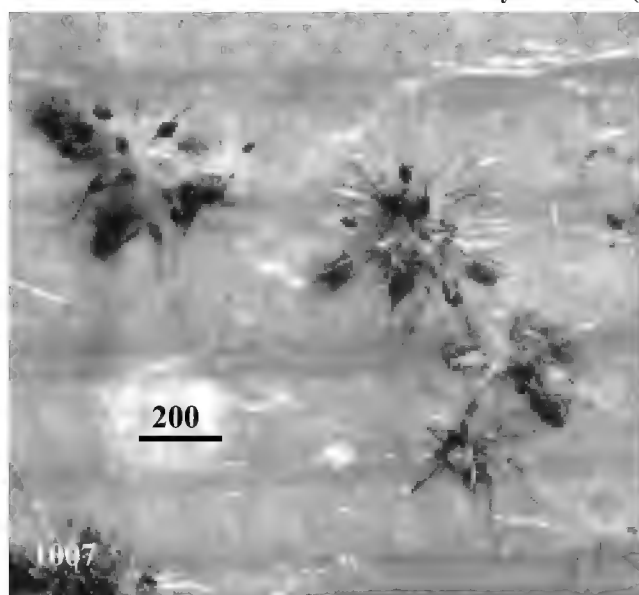
page 28

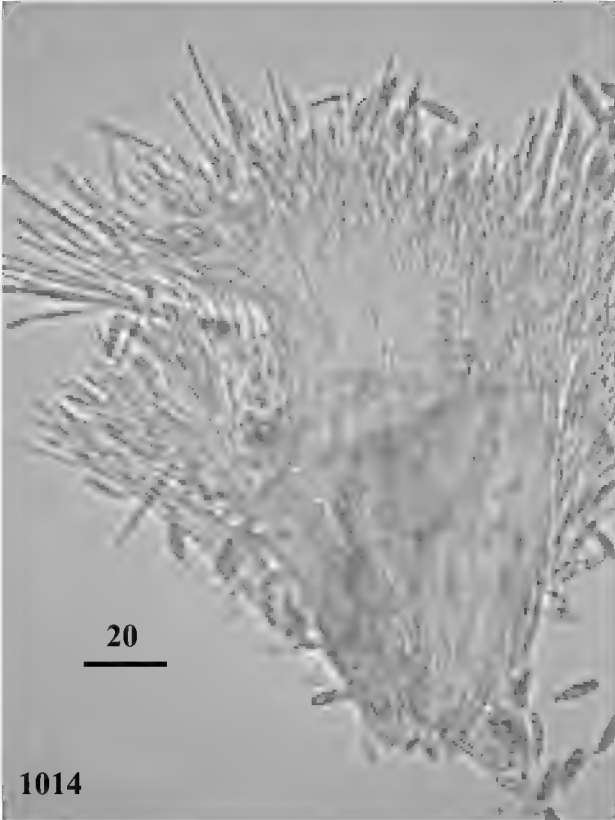
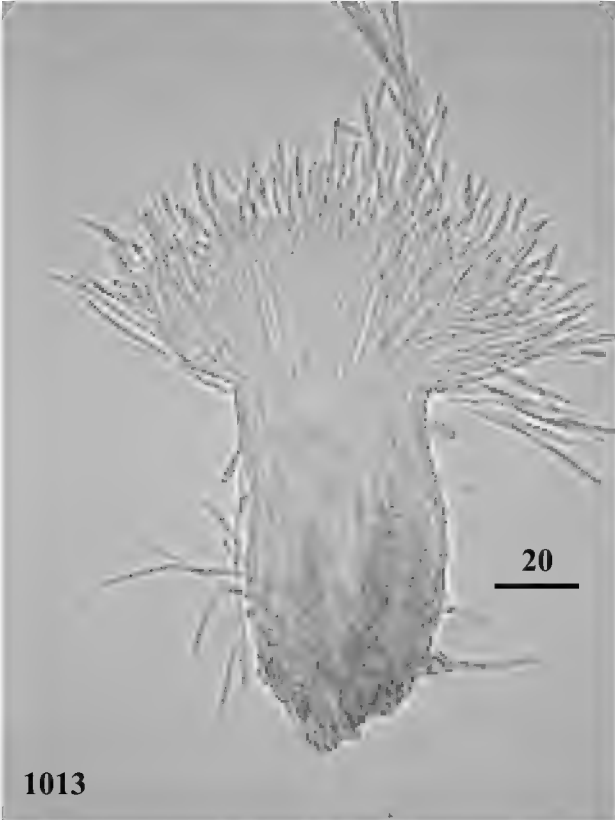
1013, 1014 = Synnemata. ( Apical parts of synnemata flaring-out artificially in slide preparation. )

1015, 1016 = Apical parts of synnemata, showing phialides.

page 29

1017, 1018, 1019, 1020 = Conidia. ( by phase contrast )







***Paraharknessia*** anam. gen. nov.

Conidiomata sporodochia, superficialia, pulvinata; stromata basalia tenuia, cellulis angularibus vel hyphis intricatis composita; conidiophora ( ubi praesentia ) brevia e stromate basali dense oriunda; cellulae conidiogenae ad conidiophora integratae vel discretiae vel e stromate directe oriundae, lageniformes, hyalinae vel pallide fuscae, apice percurrenter proliferatae annellidicae; conidia ellipsoidea, unicellularia, fusca, satura longitudinali, apice appendice non-cellulari filiformi, basi sine appendice vel cum parvo inconspicuo vestigio cellulae conidiogenae. **Etym.**: *Paraharknessia* <= certain *Harknessia* species have some similarity to the present species. Species typica postero sectione.

**1345 *Paraharknessia ellipsoidea*** anam. sp. nov.

**Descr** In b/c-medio coloniae diffusae, hyphis aeriis albis sparsis, sporodochiis ateris udis dense dispersis. Hyphae vegetativae ramosae, septatae, 0.5-4.0  $\mu$  crassae, laeves, hyalinae. Sporodochia superficialia, ex substrato facile detergenda, dissita vel frequenter confluentia, aspectu apicali plusminusve circularia, 50-250  $\mu$  diam., aspectu latere tholiformia, atera a massa conidorum; stromata basalia tenuiter pulvinata textura angulari pseudoparenchymatica ex cellulis pallide brunneis 3-5  $\mu$  diam. composita vel stromata basalia tenuiter pulvinata textura intricata, nec setis nec hyphis specialibus. Conidiophora cylindrica vel cuneiformia, ex cellulis superioribus stromatis dense oriunda, usque ad 40  $\mu$  alta, e cellulis cylindricis oblongis doliiformibus obovoideisve, 6-15 x 2.5-5.5  $\mu$  composita, laevia pallide brunneae. Cellulae conidiogenae ad apices conidiophorum in fasciculo dispositae, interdum cellulae conidiogenae e stromate directe ( sine conidiophora ) oriundae, anguste ovatae vel naviculiformes, pallide brunneae, unaquaeque e ventere globoso et collo cylindrico composita: ventera ellipsoidei, (4-)5-8 x (2-)2.5-4  $\mu$ ; colla cylindrica, 1.5-2  $\mu$  lata, percurrenter proliferata annellata, usque ad 7  $\mu$  attingentia. Conidia ellipsoidea, 10-14(-16) x 4.5-5.5  $\mu$ , unicellularia, laevia, fusca, atera in massa, sutura longitudinali singula praedita, in apice appendice singula ( rarissime appendicibus duabus ) non-cellulari cylindrica (1-)2-5(-8)  $\mu$  longa 0.7-0.9  $\mu$  lata gerentia, basi anguste truncata vel obtusa interdum inconspicuo parvo vestigio cellulae conidiophorae. Microconidia deficientia. Teleomorphosis ignota. **Etym**: *ellipsoidea* <= conidia "ellipsoid".

**Hab** Folio carioso indet. arboris dicotyledonis in fundo sylvae; Hozukyo, Kyoto Pref., Japan; March 2000. **Typus**: cultura b/c-medio exsiccata, MFC-21068.

**Mem** Some *Harknessia* species [ such as *Harknessia fumaginea* Sutton & Alcorn (1975), Nova Hedwigia **26**: p. 14, and *Harknessia kawarrae* Sutton & Pascoe (1989), Mycol. Res. **92** : p. 432 ] have some similarity to the present species.

**Photo**

page 31

1021, 1022 = Habit. Sporodochia on b/c-medium.

1023, 1024, 1025 = Sporodochia. ( by phase contrast )

1026 = Part of sporodochium. ( by phase contrast )

page 32

1027, 1028, 1029, 1030, 1031, 1032, 1033, 1034 = Conidiogenous cells, from squashed sporodochia. ( by phase contrast )

page 33

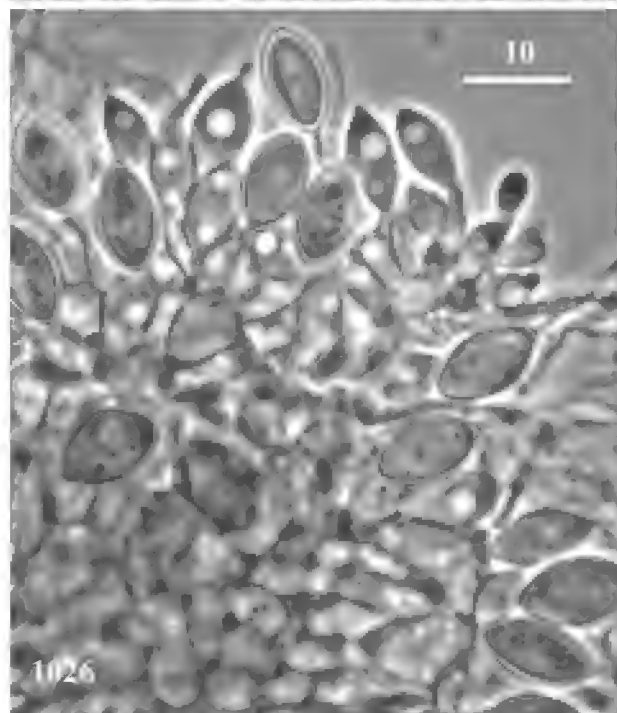
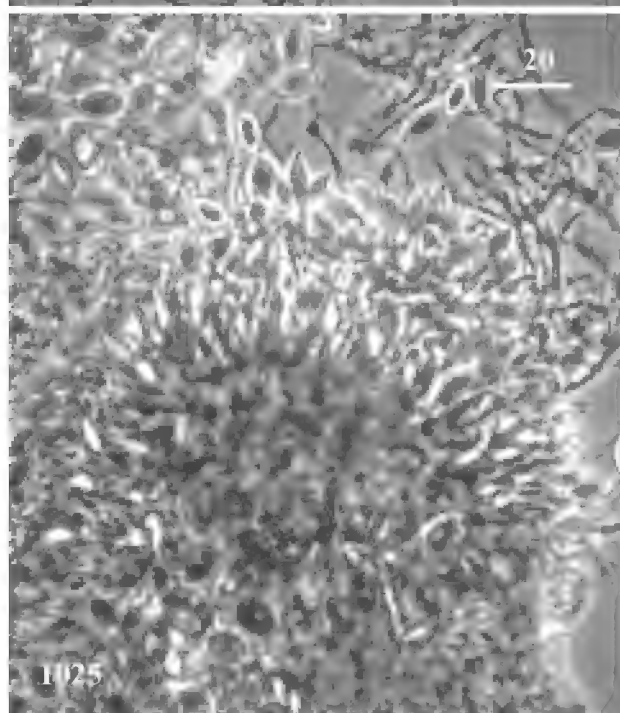
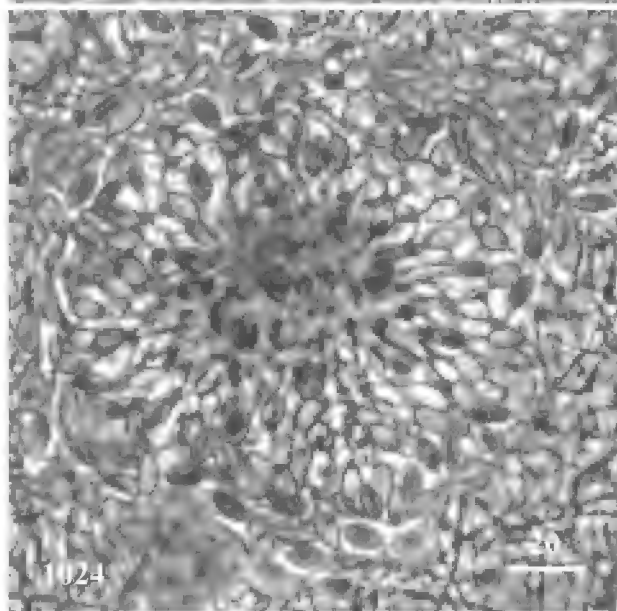
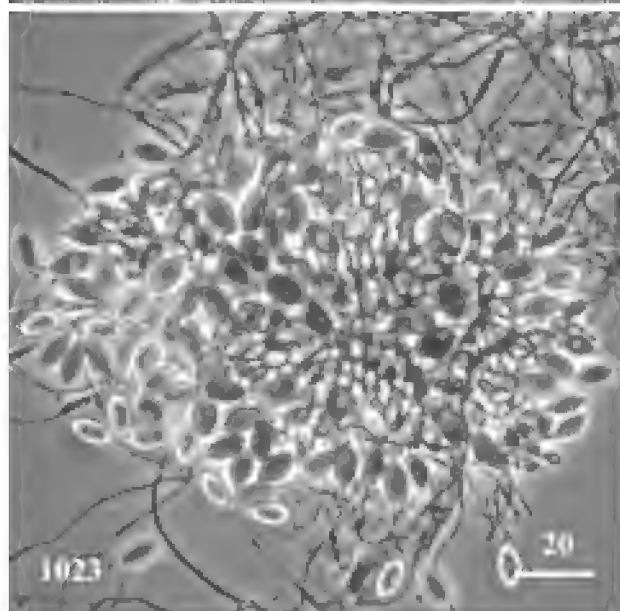
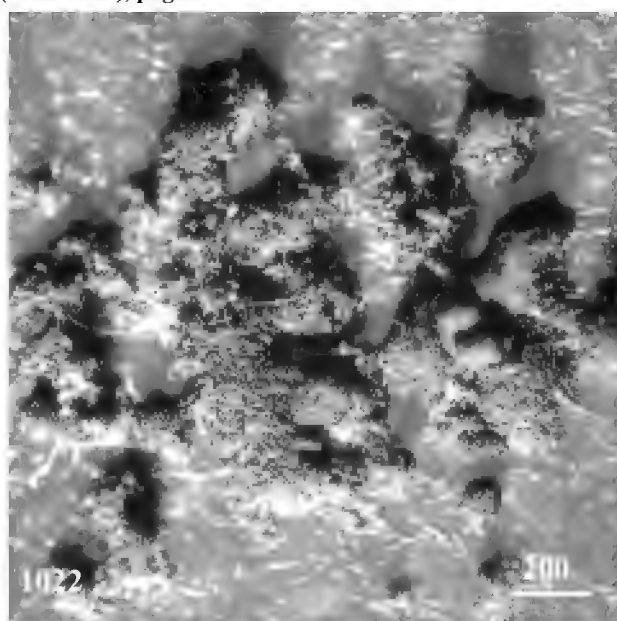
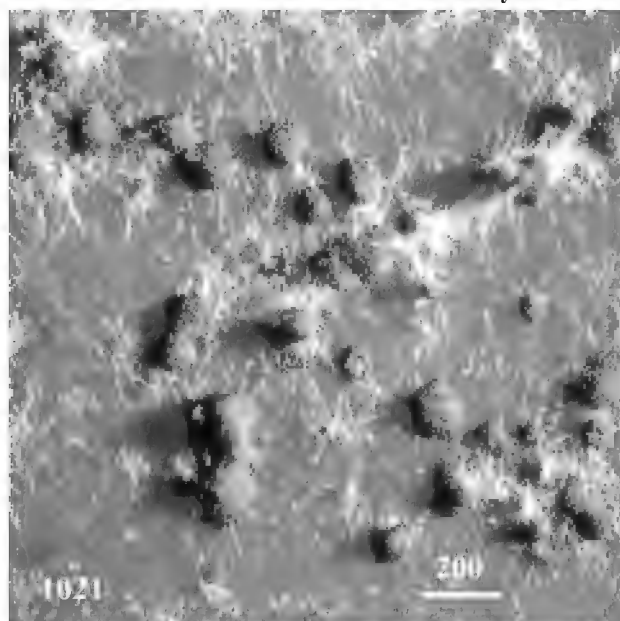
1035, 1036 = Conidia, showing appendices. ( by phase contrast )

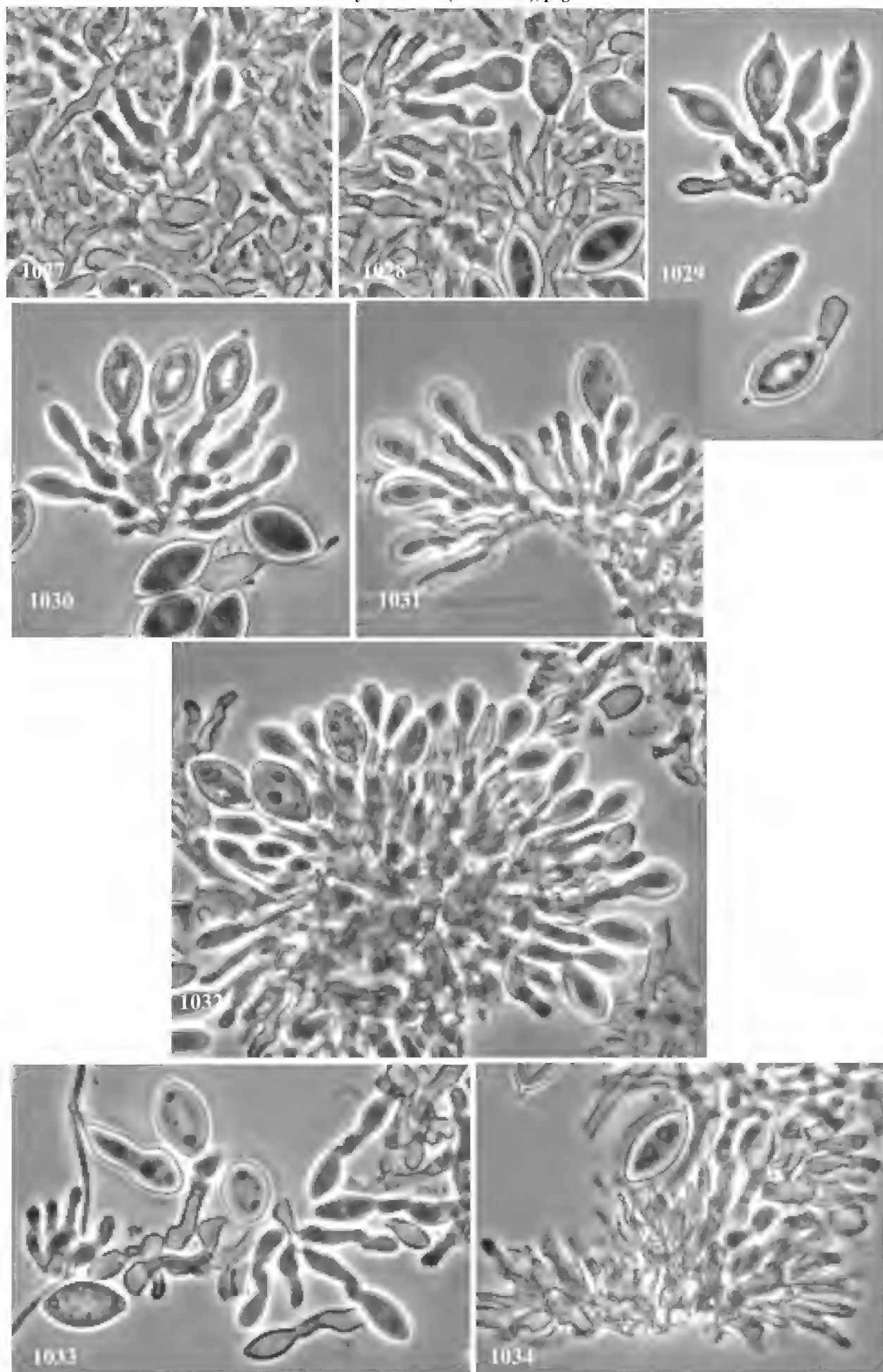
1037, 1038 = Conidia, showing satures.

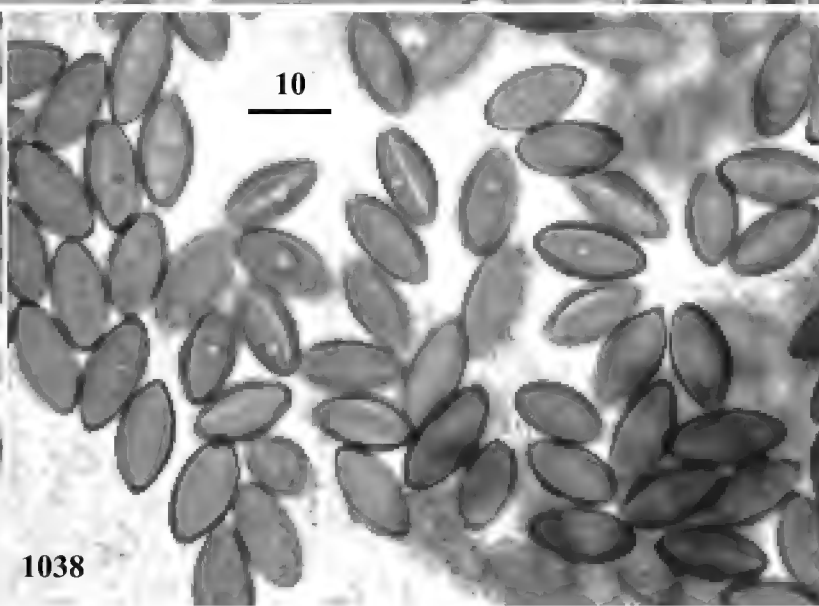
page 204 ( color plate )

1776, 1777 = Habit. Sporodochia on b/c-medium.









**1346 *Triadelfia romanica*** O. Costantinescu et Samson (1982), Mycotaxon **15**: 482.

**Descr** In CMA & b/c-medio: Coloniae tarde crescentes, aspectu atro-brunneae pulveraceae a sporodochiis dense dispersis, margine hyalinae diffusae. Hyphae vegetativae hyalinae, non characteristicae. Heteromorphica, conidiis quinquiformis. (1) Conidia cylindrica ad cylindro-clavata, (0-) 1-septata, modice brunnea, 7-13 x 2.5-4.0  $\mu$ , e sporodochia oriunda; sporodochia parva, tenuiter pulvinata, margine definito, frequenter confluentia, pallide brunnea; conidiophora dense contigua, breviter ramosa, in cellulas conidiogenas terminata; cellulae conidiogenae ampulliformes, 3.5-9.0  $\mu$  longae, 2.5-3.0  $\mu$  latae, pallidissime brunneae, collo usque ad 4.5  $\mu$  longo, 1.5-2.0  $\mu$  lato, monoblasticae. (2) Conidia allantoidea ad oblonga, continua, hyalina, 4.5-12 x 2-2.5  $\mu$ , praecipue e pionnotibus hyalinis oriunda. (3) Conidia obovoidea vel oblonga, brunnea, (10-)11.5-18 x 5-8.5  $\mu$ , 1-septata. (4) Conidia subglobosa ad obovoidea, 0-septata, brunnea, 6-11.5 x 6-7.5  $\mu$ . Conidia (3) et (4) oriunda e cellulis conidiogenis ut in (1) sed solitarie dispersis in hyphis vegetativis repentibus. (5) Conidia peranguste obclaviformia, multiseptata, incolorata, hyphas vegetativas terminalia. (1) est forma dominans, (2) est forma subdominans, (3) et (4) sunt formae minores, et (5) est forma rarissima.

**Hab** MFC-4P609. Fronde cariosa palmae in fundo sylvae densae; prope Colonia Angamos, Peru (located at the Peru-Brazil border of the Amazon); July 1994.

**Ref** C. A. Shearer & J. L. Crane (1971), Mycologia **63**: p. 247-248.  $\Rightarrow$  *Triadelfia heterospora* gen. et sp. nov. // O. Costantinescu et R. A. Samson (1982), Mycotaxon **15**: 472-486.  $\Rightarrow$  p. 482. *Triadelfia romanica* sp. nov. / p. 474. key to *Triadelfia* spp., including *heterospora*, *inquinans*, *alabamensis*, *loudetiae*, *pulvinata*, and *romanica*. // S. S. Tzean & L. L. Chen (1989), Mycologia **81**: 626-631. A new species of *Triadelfia* from Taiwan.  $\Rightarrow$  *T. diversa* sp. nov.; a key to 8 spp. // A. Revay (1992), Studia Bot. Hungarica **23**: 63-68. A new species of *Triadelfia* from Hungary.  $\Rightarrow$  *T. margoensis* sp. nov.; a key to 12 spp., including *uniseptata*, *australiensis*, *alabamensis*, *hungarica*, *queenslandica*, *inquinans*, *heterospora*, *diversa*, *romanica*, *pulvinata*, *loudetiae*, and *margoensis*.

**Photo**

page 35

1039 = Habit on CMA. Dark sporodochia of (1)-type conidia, small hyaline pionnotes of (2)-type conidia, scattered (3)- or (4)-type conidia as scattered dark dots.

1040 = An intact sporodochium with (1)-type conidia.

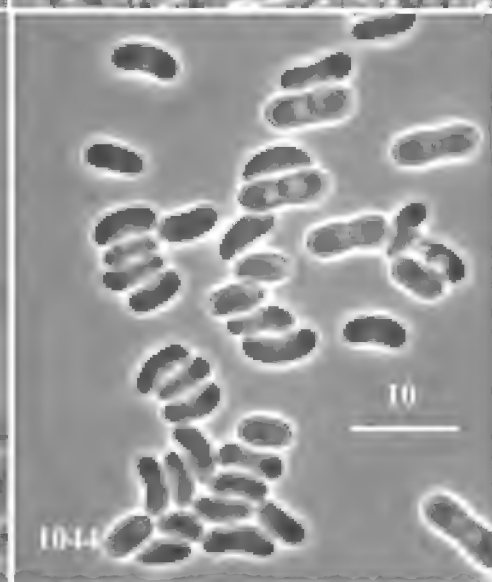
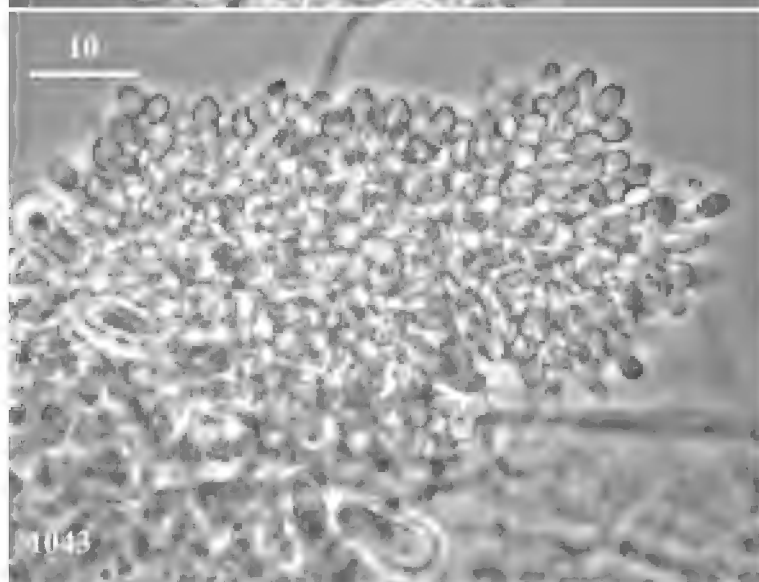
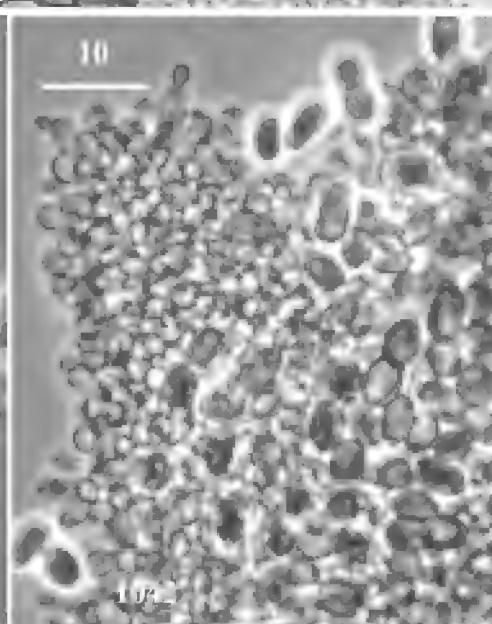
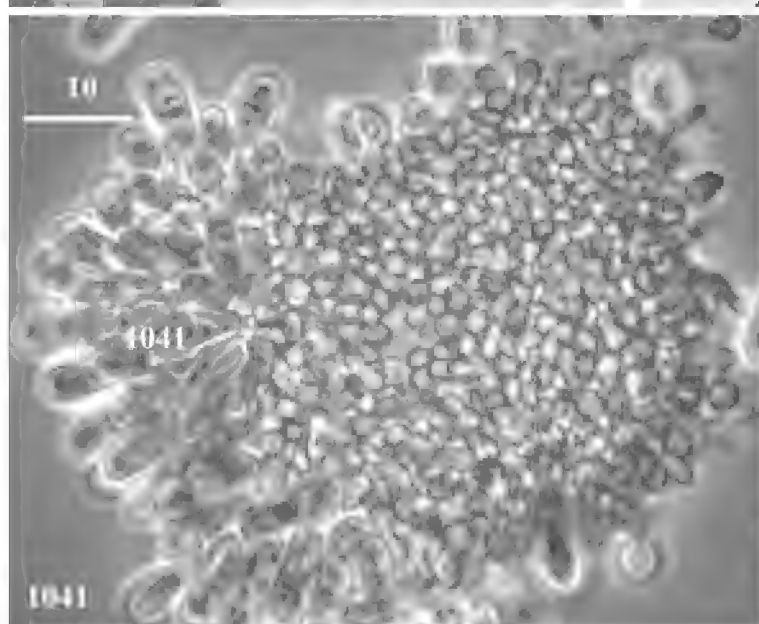
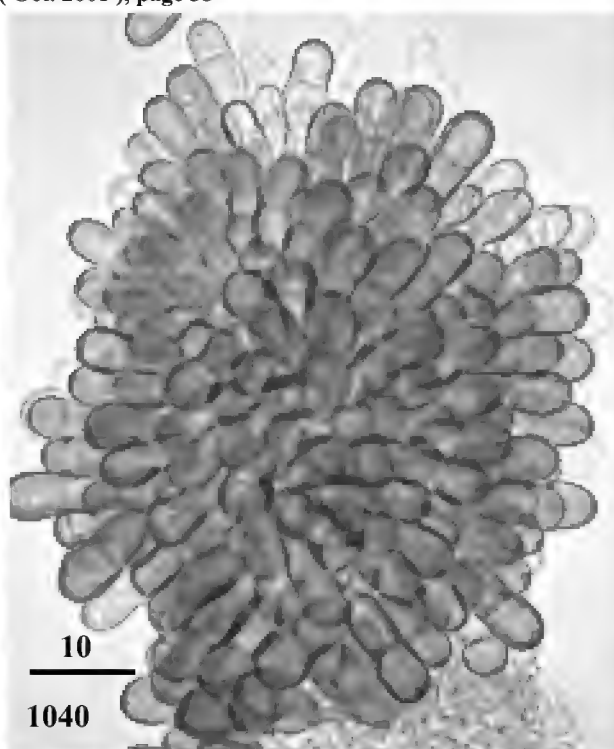
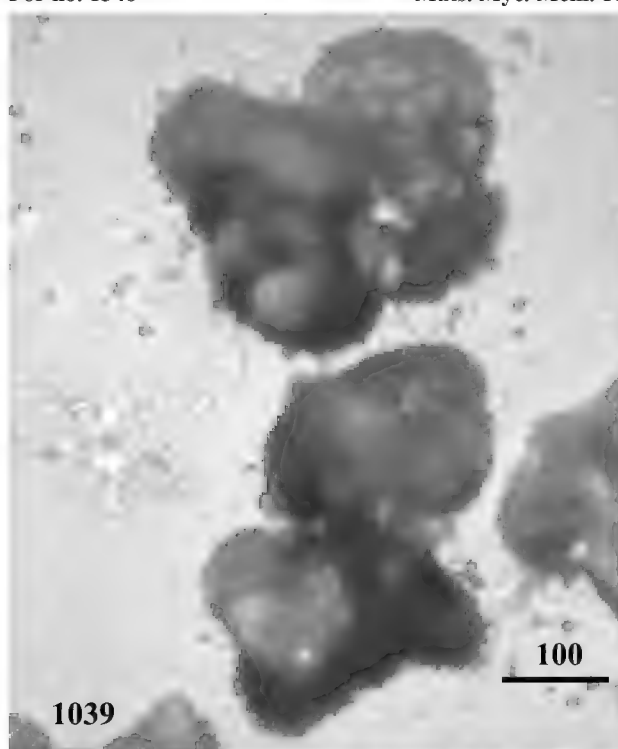
1041, 1042, 1043 = Sporodochia with (1)-type conidia, conidia mostly washed away. ( by phase contrast )

1044 = Conidia of (1)- and (2)- type. ( by phase contrast )

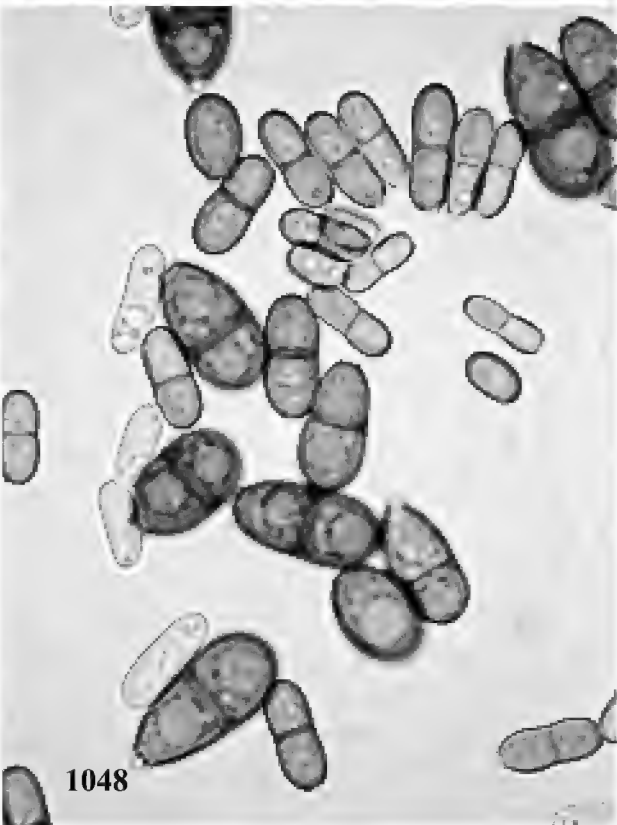
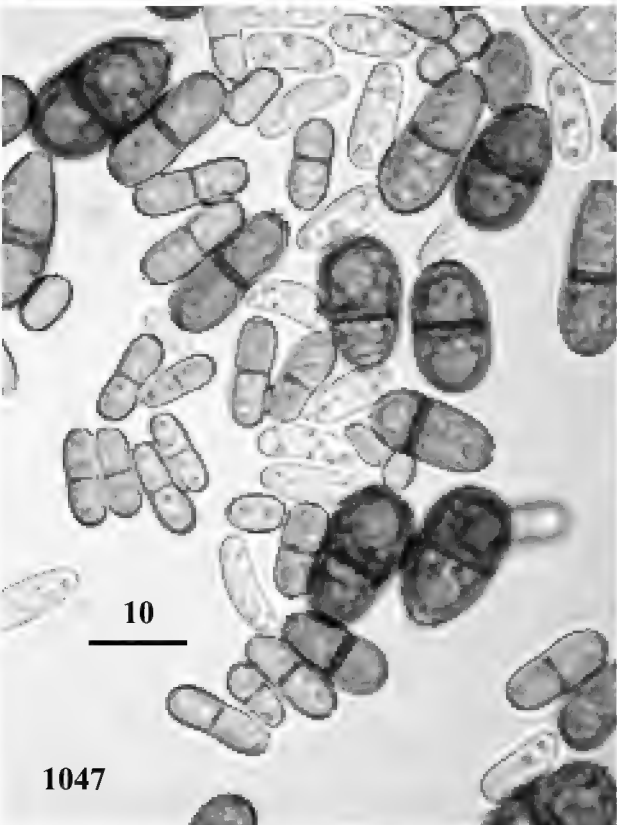
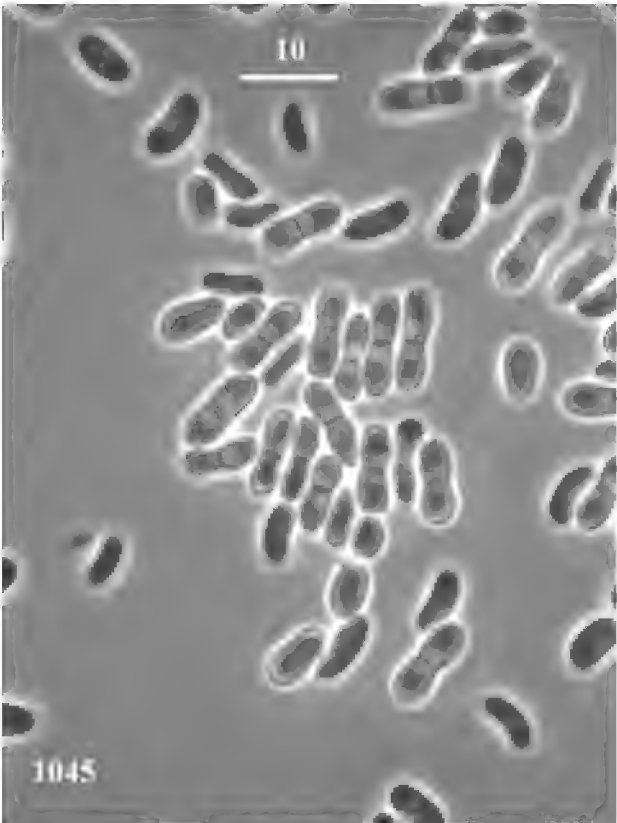
page 36

1045, 1046 = Conidia of (1)- and (2)- type. ( by phase contrast )

1047, 1048 = Conidia of (1)-, (2)-, (3)-, and (4)-type.









**1347 *Coryneum neesii*** B. C. Sutton (1975), Mycol. Pap. **138**: p. 40-41.

**Descr** In b/c-medio: Acervuli dissiti, initio immersi, deinde erumpentes, atrobrunnei, fundo pseudoparenchymatici. Conidiophora e stromate basali dense enascentia, cylindrica, septata Cellulae conidiogenae ad conidiophorum terminaliter integratae, cylindricae, ad apices holoblasticae tum 2-3-plo percurrenter proliferatae, itaque conidiis additiis formatae. Conidia fusiformia, apice angustata, basi truncata, 54-74 x 19-21.5  $\mu$ , 6-8, predominantan 7-distoseptata, luminibus deminutis, laevia, brunnea.

Coloniae in CMA modice crescentes, in parte centrali floccosae fuscae compluribus sporodochiis, margine submersae atrogriseae definitae. Conidiophora e stromate basali dense enascentia, simplicia vel ramosa, usque ad 70  $\mu$  alta, pallide brunnea; cellulae conidiogenae ad conidiophorum terminaliter integratae, cylindricae, 6-7.5  $\mu$  latae, subhyalinae, ad apices usque aliquot annellationes ferentes. Conidia fusiformia, (43.5-)54-74(-82.5) x 18.5-25  $\mu$ , 4-7, predominantan 7-distoseptata, basi conico-truncata 6-7.5  $\mu$  lata, olivacea.

In altera b/c-medio cultura post 7 annos ex isolatione conidia (60-)75-90(-100) x 19.5-27.5  $\mu$ , 3-7, typice 7-distoseptata.

**Hab** MFC-4P744. Fronde cariosa palmae in fundo sylvae densae; prope Colonia Angamos, Peru ( located at the Peru-Brazil border of the Amazon ); July 1994.

**Ref** J. Weindlmayr (1963). Sydowia **17**: 93-101. Beitrage zur Kenntnis einiger Arten der Gattung *Coryneum* Nees. // B. C. Sutton (1975), Mycol. Pap. **138**. => Nineteen species and one variety of *Coryneum* are accepted and monographed. *Coryneum neesii* Sutton sp. nov.: conidia (65-)68-82(-88) x 18-22(-24)  $\mu$ , 6-8-distoseptate. // T. R. Nag Raj (1977), Icones Generum Coelomycetum **8**: p. 6-7. // B. C. Sutton (1980), The Coelomycetes, p. 350-357.

**Photo**

page 38

1049, 1050 = Conidia from CMA.

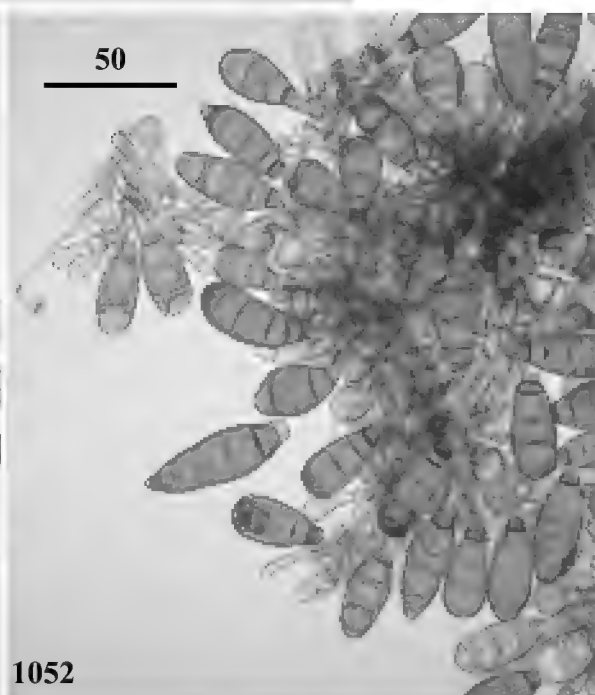
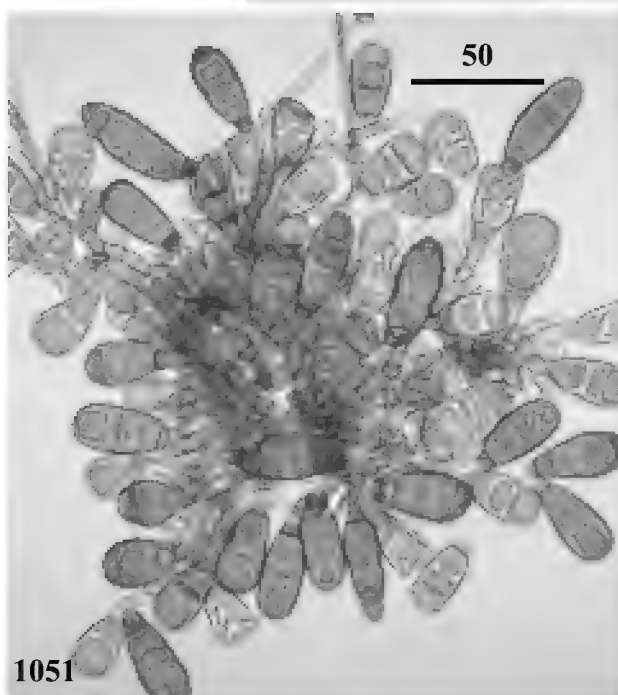
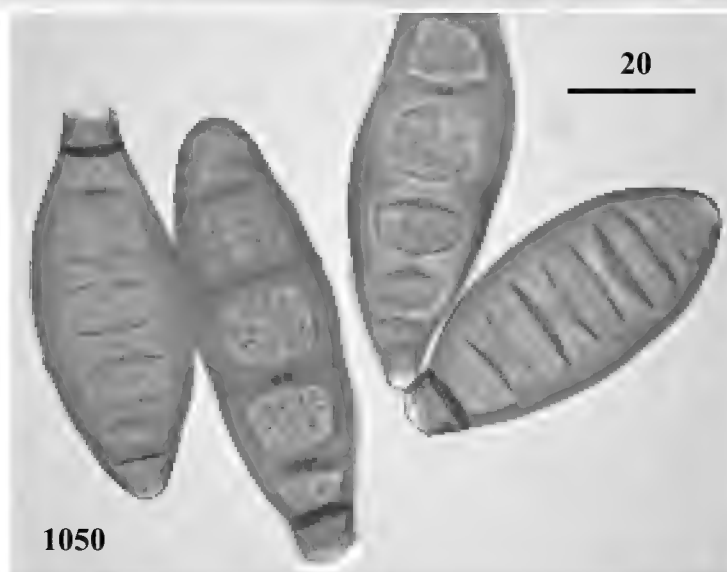
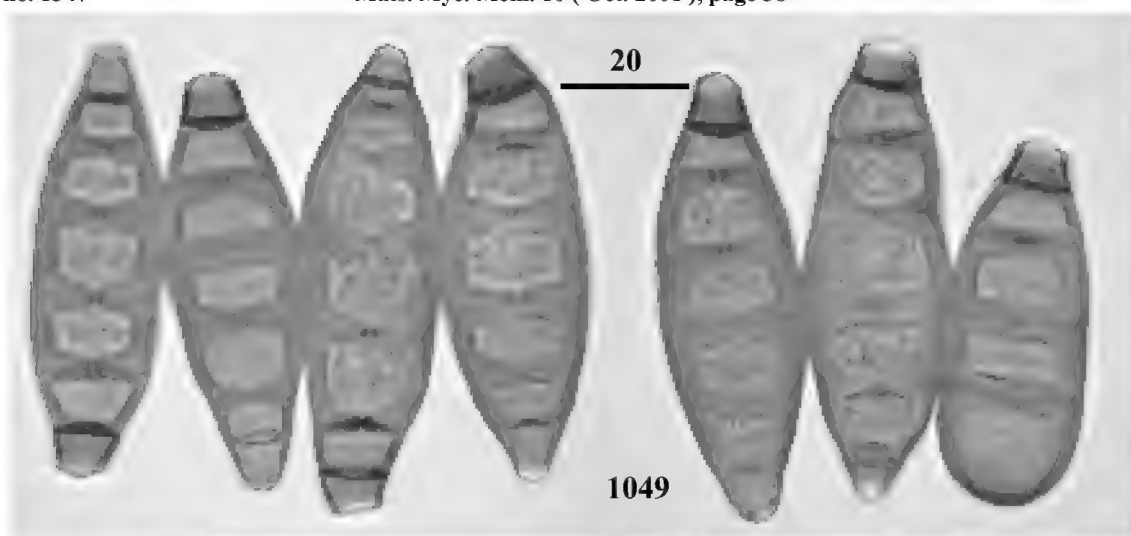
1051, 1052 = Fragments of sporodochia from CMA. ( squashed )

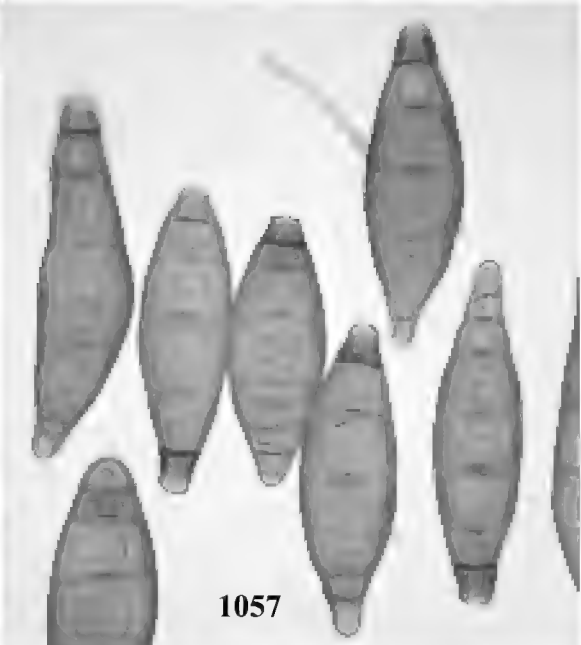
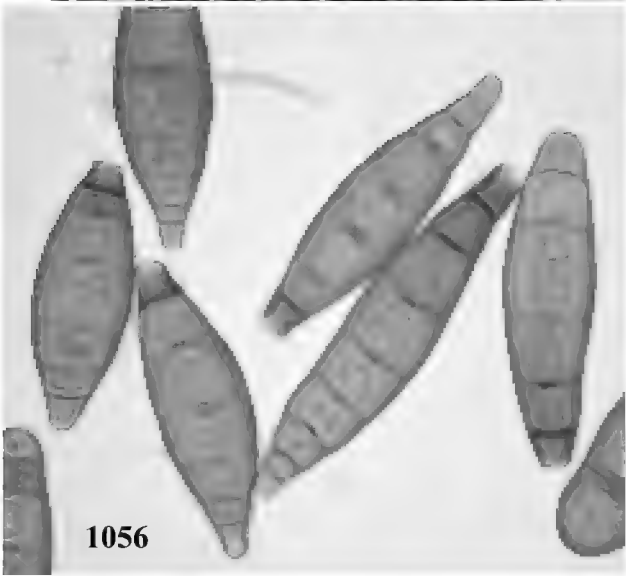
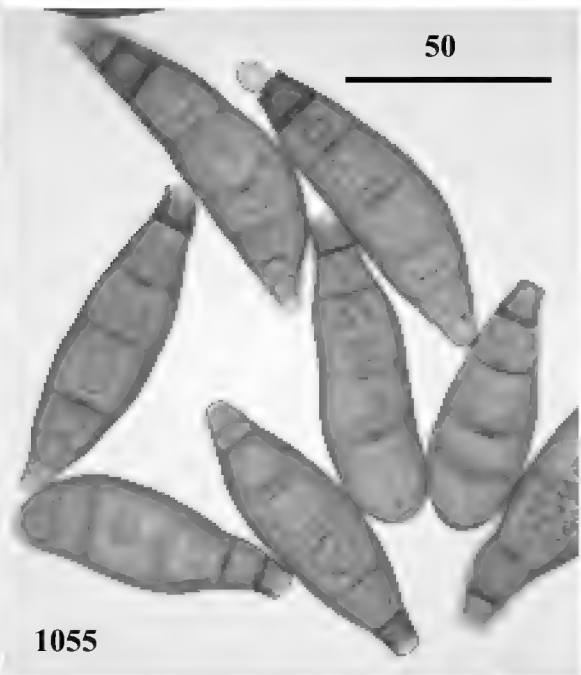
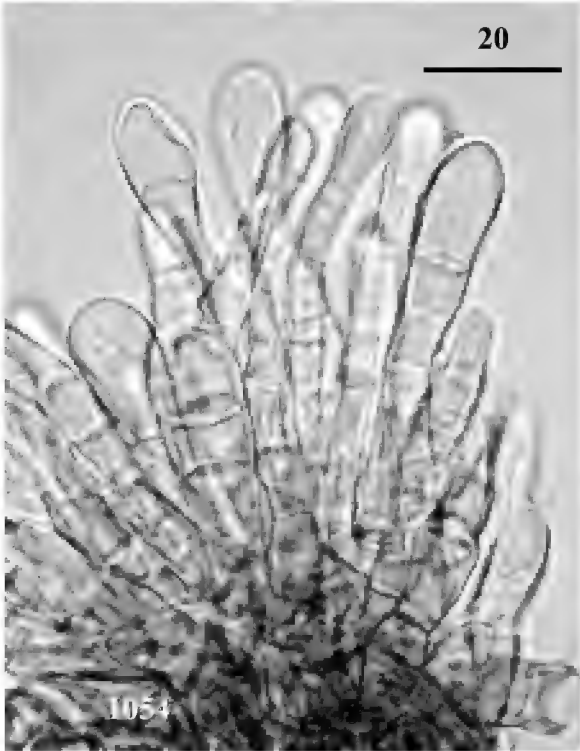
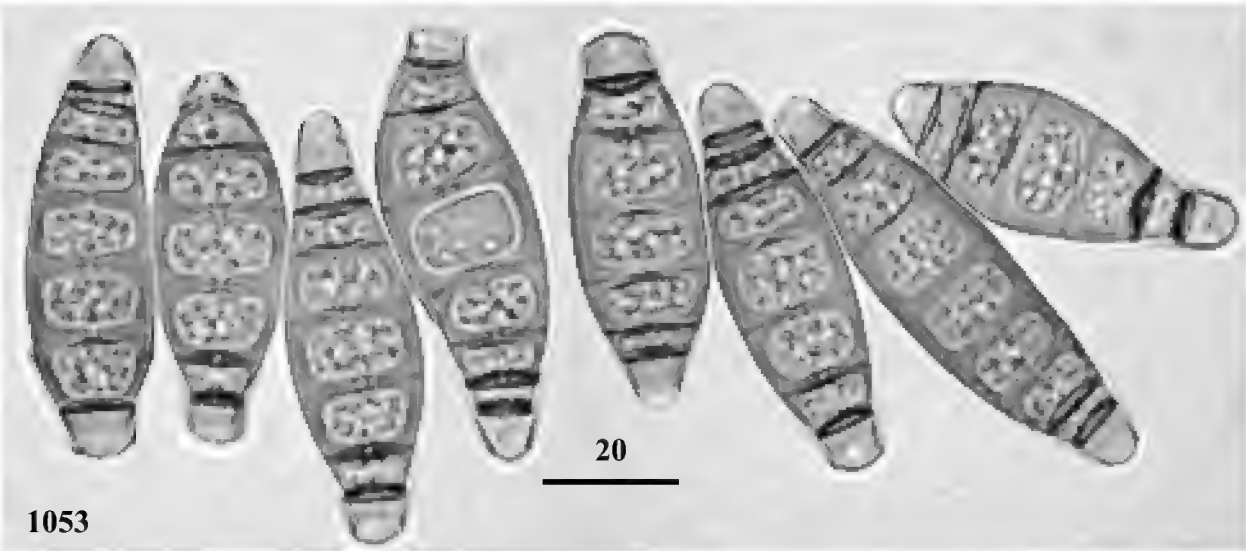
page 39

1053 = Conidia from the the specimen.

1054 = Fragment of sporodochum from the specimen.

1055, 1056, 1057 = Conidia from acervuli on b/c-medium, after 7 years from isolation.





***Catenocuneiphora*** anam. gen. nov.

Conidiomata praecipue sporodochialia vel interdum hyphomycetosa, hyalina vel pallide colorata. Hyphae vegetativae hyalinae vel subhyalinae. Conidiophora e tela basali textura intricata dense erecta ( in conidiomata sporodochialia ) vel e hyphis repentibus oriunda ( in conidiomata hyphomycetosa ), infra simplicia supra repetite ramosa, e catenis cellulis obclavatis vel cuneiformis composita. Cellulae conidiogenae sunt cellulae summae vel interdum subsummae in conidiophoris, similes superarum cellularum conidiophorum, cuneiformes, apice enteroblasticae-phialidicae vel enteroblasticae-multistratae; post secessionas conidiorum interdum per denticulos longitudinaliter proliferatae. Conidia oblonga ad allantoida, unicellularia, mucosa in massa. **Etym.:** *Catenocuneiphora* <= conidiophores with chained cuneiform cells. Species typica postero sectione.

**1348 *Catenocuneiphora mucosa*** anam. sp. nov.

**Descr** Coloniae in CMA modice crescentes, tenuiter diffusae, hyphis aeriis sparsis, area centrali cremeae ad pallide aurantiacae mucosae ex pionnotes-sporodochiis confuentibus, margine lato incolorato sterili. Hyphae vegetativae ramosae septatae laeves hyalinae 1-5  $\mu$  latae. Conidiomata sunt pionnotes-sporodochia, quae dense dispersa, superficialia, tenuiter pulvinata, aspectu gelatinosa, ab apice visa circulaia, 135-330  $\mu$  diam., separata, hyalina, postea frequenter confluentia, postremo strato cremeo ad pallide aurantiaco mucoso irregulariter marginato formata. Pionnotes-sporodochia e basali tela hypharum intricatarum et hyphis fertilibus ( i.e. conidiophora et cellulae conidiogenae ) composita. Conidiophora e tela basali dense erecta; altitudine tota usque ad 260  $\mu$  attingentia: parte inferna semimacronematosae ascendente septata non ramosa, longitudine variabilia, 10  $\mu$  ( tantum una cellula cylindrica ) ad 150  $\mu$  longa, in quaque cellula cylindrica 2.5-4  $\mu$  lata vel clavata 8-16(-24)  $\mu$  longa inferne 1.5-2.5  $\mu$  lata sursum ad 3-5  $\mu$  inflata, itaque similia "racket hyphae" dermatophytum; parte superiore repetite radiatim ramosa ambitu obconica ad hemisphaerica, (40-)60-150  $\mu$  alta, in quaque cellula clavata vel obovata, laevia, hyalina, 7.5-15  $\mu$  longa, basi 1.5-2.5  $\mu$ , sursum ad 3-5  $\mu$  inflata, ad apicem 1-3 sitis ramificantibus. Cellulae conidiogenae sunt cellulae summae et interdum subsummae in conidiophoris, eadem similes superarum cellularum conidiophorum, cuneiformes laeves hyalinae, 10-16 x 4.5-7.5  $\mu$ , apice 1-3(-4) oribus 2-2.5  $\mu$  diam., enteroblasticae-phialidicae vel enteroblasticae-multistratae; post conidiales secessiones interdum per denticulos longitudinaliter proliferatae. Conidia oblonga ad allantoida, unicellularia, praecipue leviter curva, (10-)13-20(-245) x 6.5-9(-12)  $\mu$ , laevia ad verruculosa, initio hyalina in massa, vetustate cremea ad pallide aurantiaca mucosa in massa. Additamentum ad sporodochia supra descripta, conidiophora solitaria disseta praesentia. **Etym.:** *mucosa* <= conidia in "mucous" liquid.

**Hab** E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Kobe Municipal Arboretum, Kobe, Japan; Sept. 1999. **Typus:** exsiccata cultura CMA , MFC-21049.

**Mem** Only in the first culture generation on CMA, synnematos conidiomata were observed among sporodochial ones ( vide 1076 ).

**Photo**

page 41

1058 = Conidiomata, on CMA.

1059, 1060, 1061, 1062, 1063 = Conidiophores. ( most conidia were washed out, by phase contrast ).

page 42

1064, 1065, 1066, 1067, 1068 = Conidiophores. ( by phase contrast ).

page 43

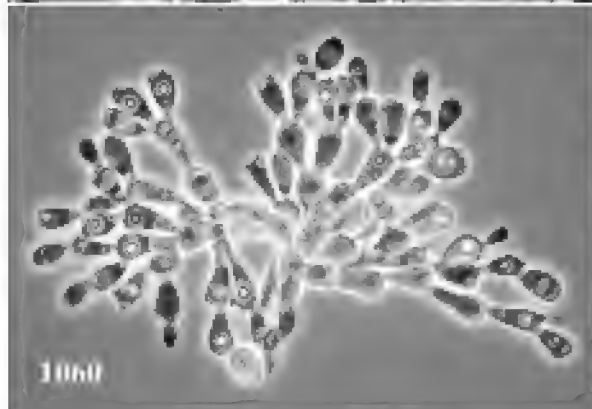
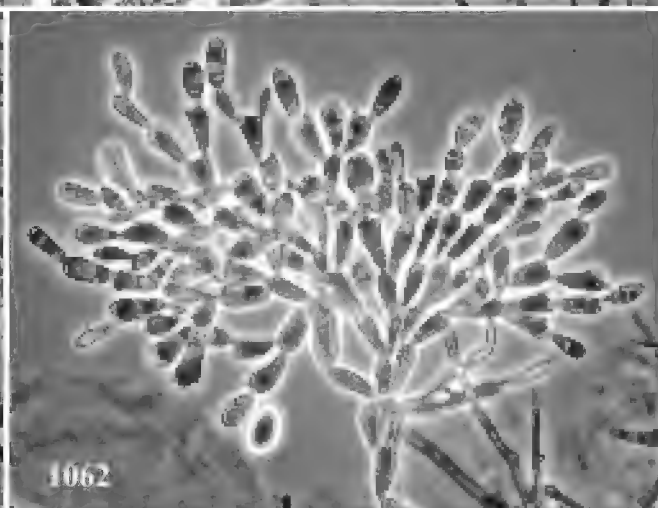
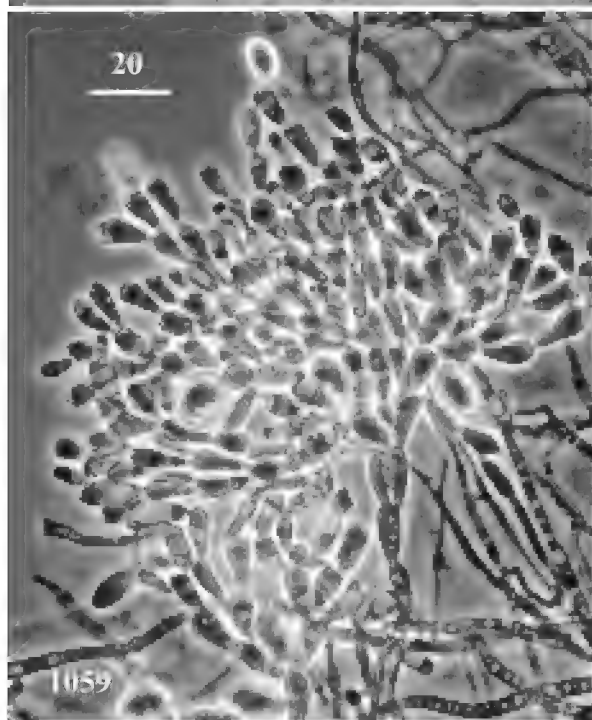
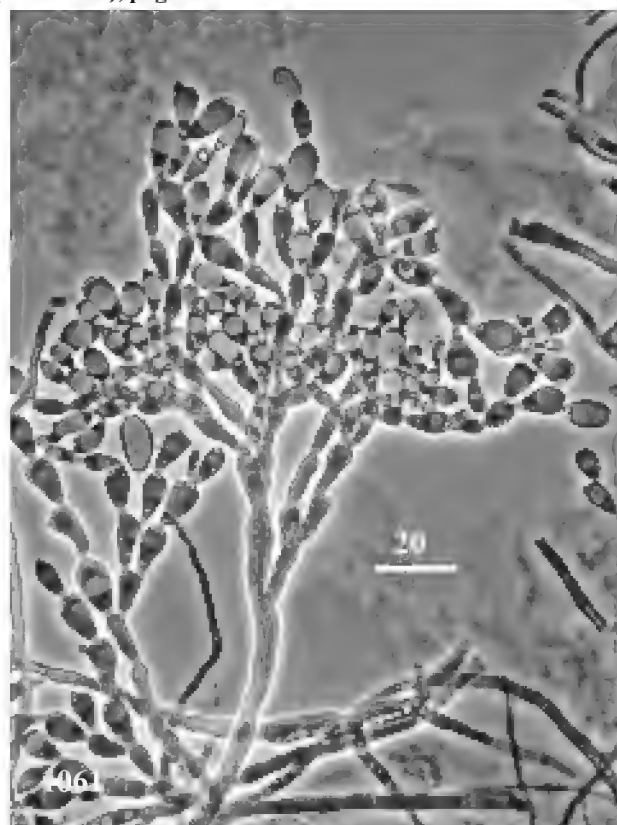
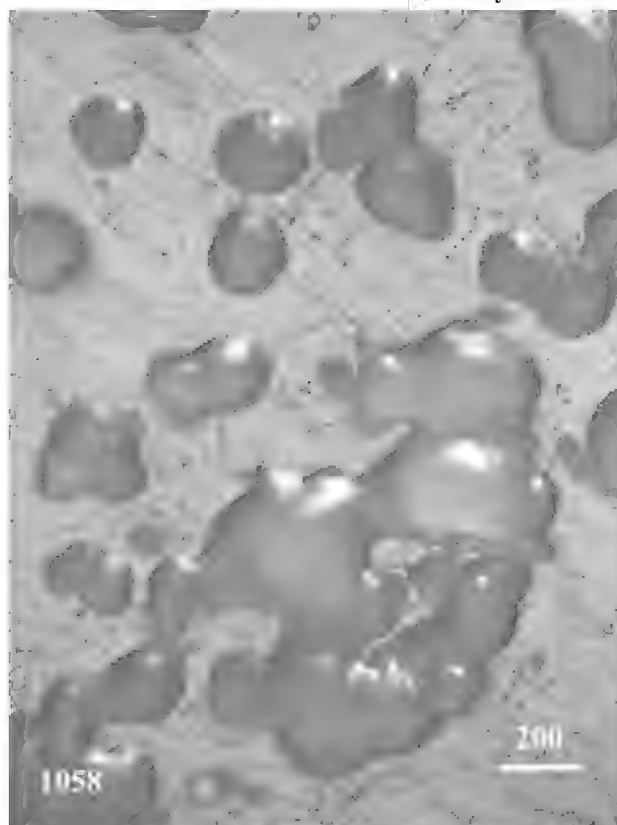
1069, 1070, 1071, 1072 = Conidiophores. ( by phase contrast )

page 44

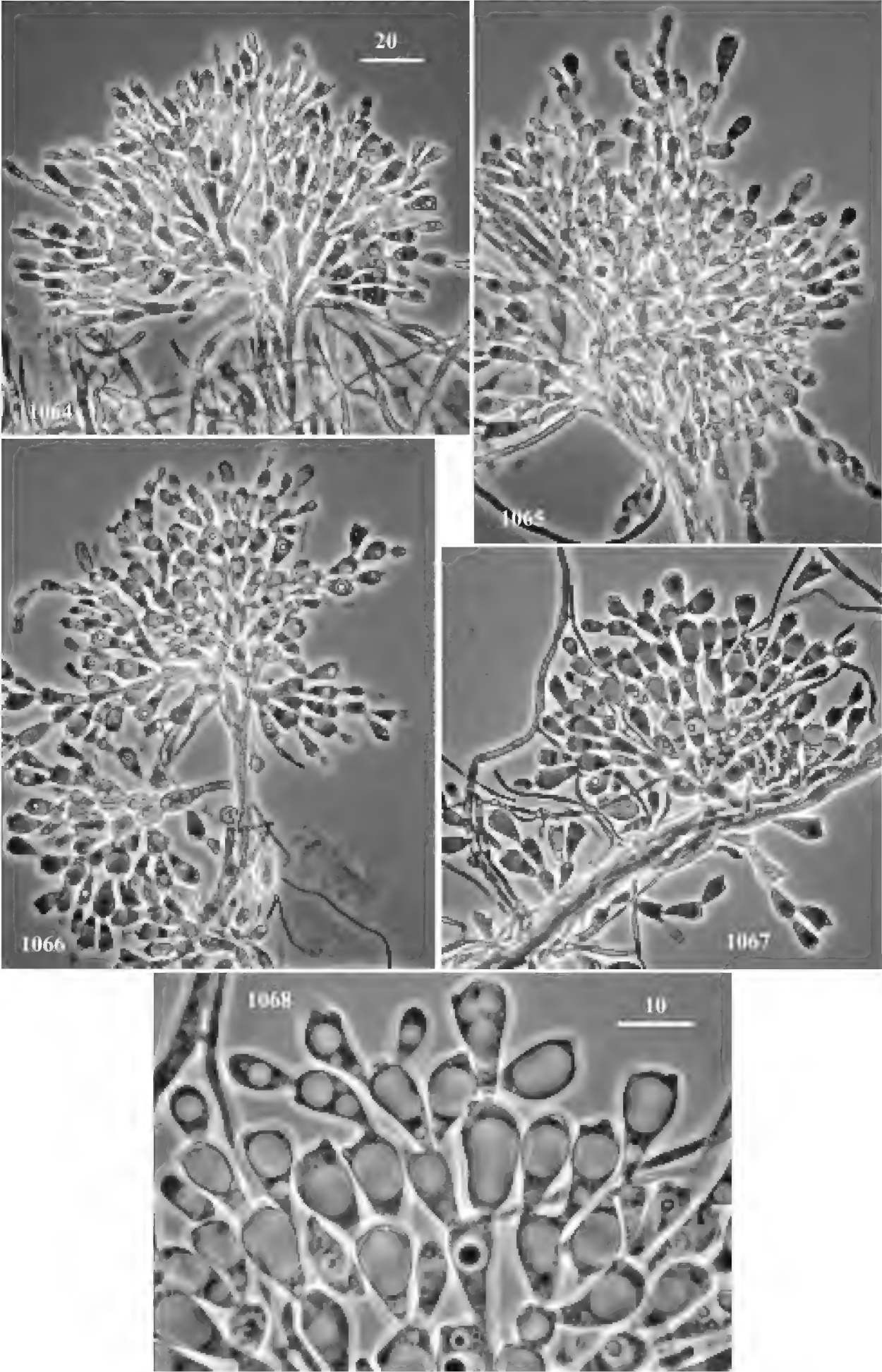
1073 = Conidiophores. ( by phase contrast )

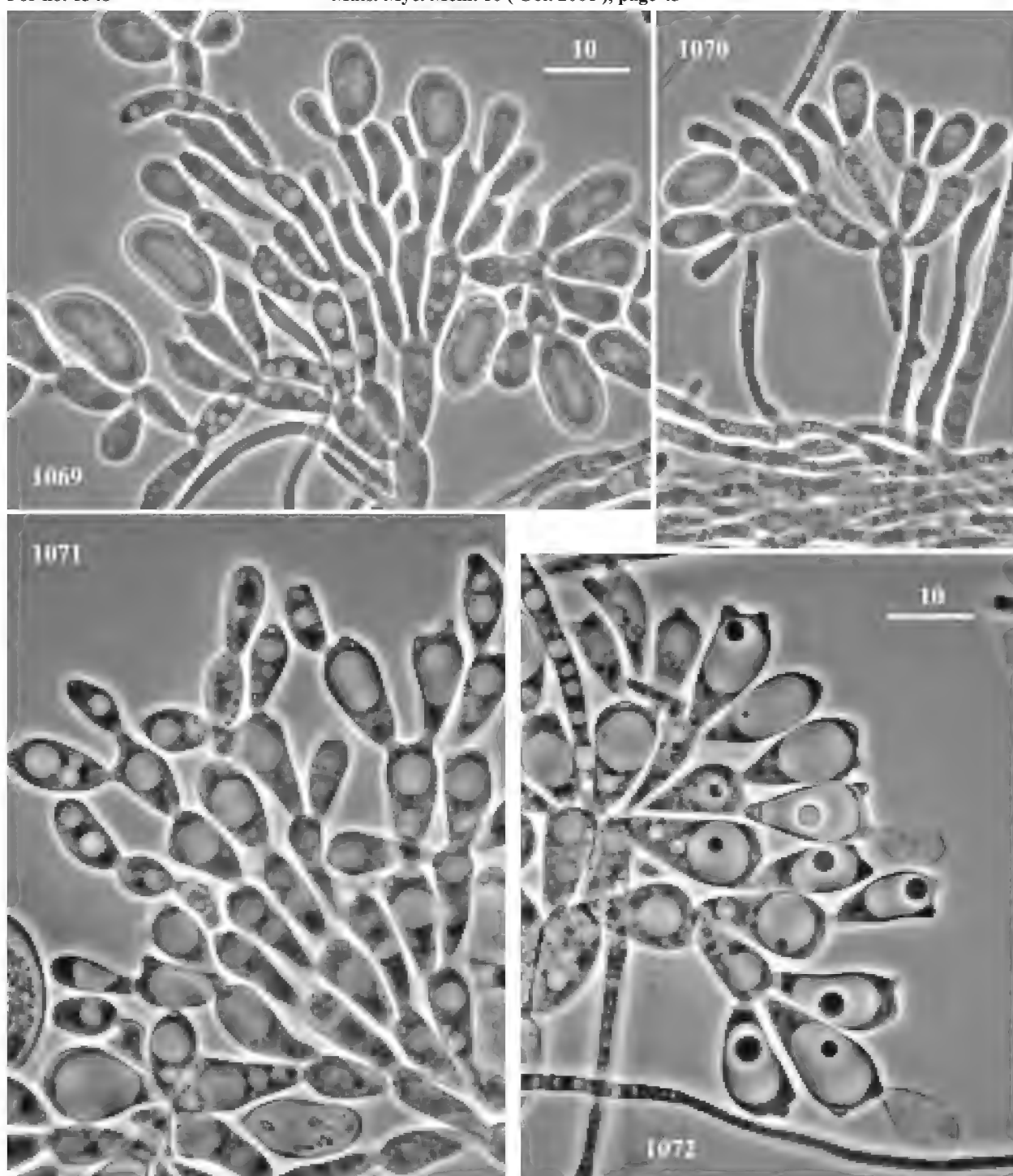
1074, 1075 = Conidia. ( by phase contrast )

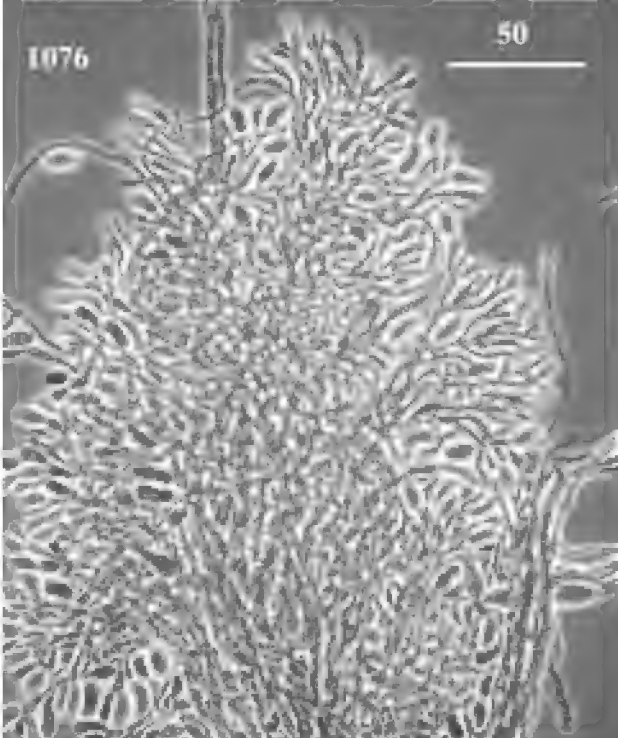
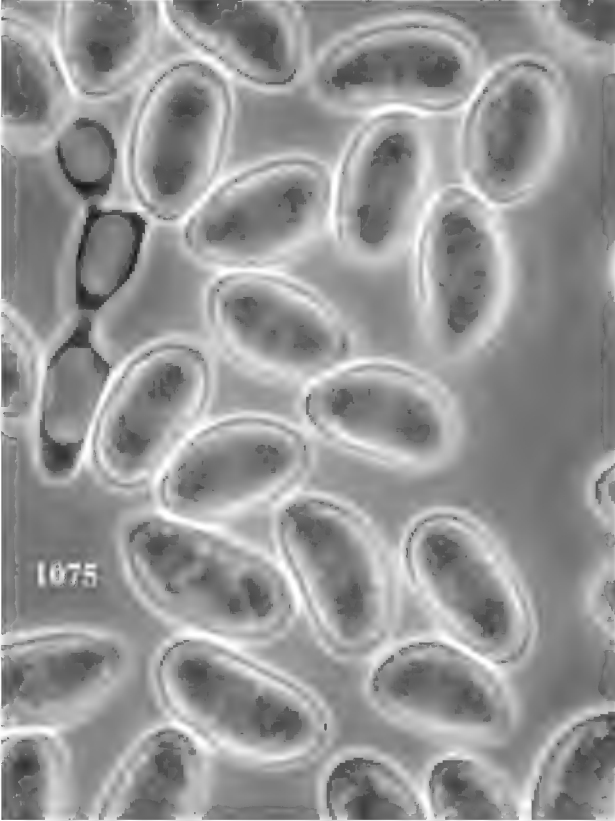
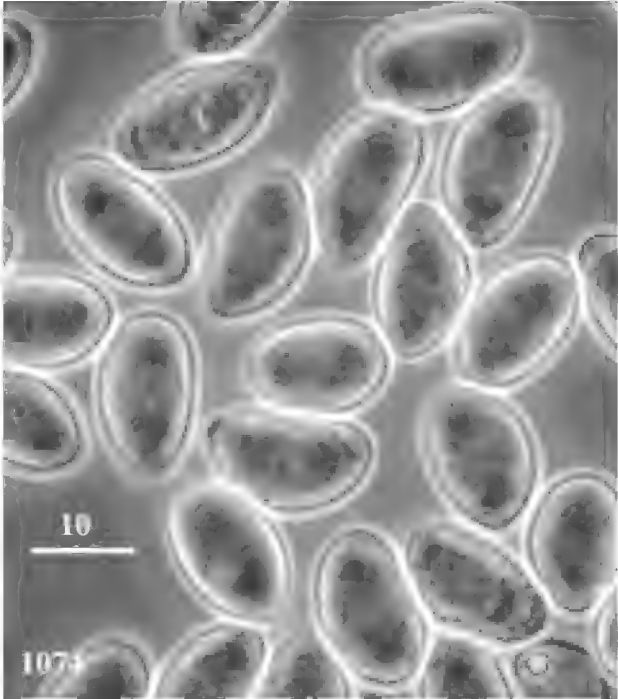
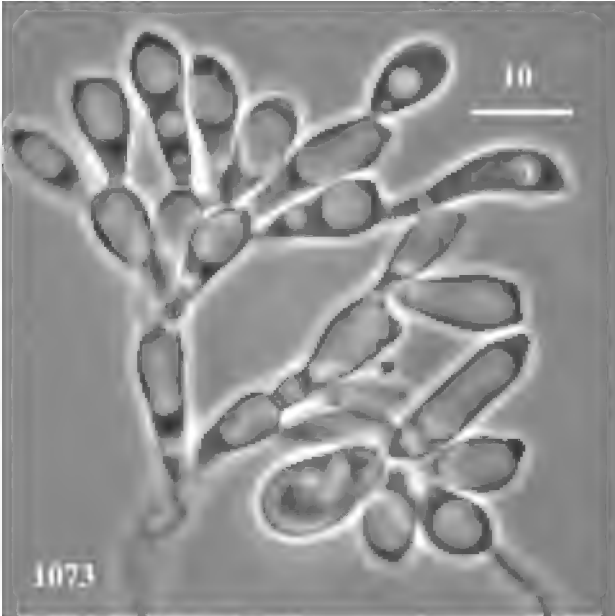
1076 = An apical part of synnema which only formed in the first culture generation. ( most conidia were washed out, by phase contrast ).











1349 *Tubakia dryina* ( Sacc.) Sutton, 1973. Trans. Br. mycol. Soc. **60**: 165.

= = *Leptothyrium dryinum* Saccardo, 1878. Michelia **1**: 202.

= = *Actinopelte dryina* ( Sacc.) Hoehnel, 1925. Mitt. Bot. Inst TH Wien **2**: 68-70.

*Tubakia* B. Sutton (1973) nom. nov. was established, since *Actinopelte* Sacc. (1913) has been used for an alga, *Actinopelte* Stizenb. (1861).

**Descr** In b/c-medio conidiomata sunt scutella, quae prosenchymatosa, dispersa, solitaria vel gregaria, aspectu apicali circularia, 50-150  $\mu$  diam., atro-brunnea, e columella centrali et hyphis ramosis crassitunicatis brunneis margineum versus radiatis composita; conidiophora ( cellulae aggregatae ) dense ramosa, subhyalina, circumcincta columella centrali, ex cellulis breviter cylindricis pallide brunneis composita; cellulae conidiogenae terminaliter integratae vel discretatae, ovato-cylindricae, apice angustatae, ad ores enteroblasticae-phialidicae, parietibus periclinalibus manifeste spissescenscentibus, 6-14 x 3-4.3  $\mu$ , subhyalinae. Conidia oblonga, basi fere sine cicatrice, (11-)12.5-17(-21) x 7.5-9(-10)  $\mu$ , laevia, pallide brunneola, brunnea mucosa in massa. Status microconidicus adest. Teleomorphosem non vidi.

In culturis successive transplantis formae varie degeneratae productae. Conidiomata frequenter scutellis et columellis partim ad omnino destituta, itaque a sporodochiis *Colletotrichi sinuatosetiferi* ( vide Mats. Myc. Mem. **9**, no. 1251, 1996 ) vix distinguibilia.

**Hab** MFC-21001. E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Kasuga-cho, Hyogo Pref., Japan; April 1999.

**Ref** F. Theissen (1913), Ann. Mycol. **11**: 493-511 & Pl. 21. => *Actinopelte japonica* ( type sp. ) is described and illustrated in p. 507-509. // D. P. Limber & E. K. Cash (1945), Mycologia **37**: 129-137. *Actinopelte dryina*. // T. Yokoyama & K. Tubaki (1971), IFO Res. Comm. **5**: 43-77. // B. C. Sutton (1973), Trans. Br. mycol. Soc. **60**: 164-165. // D. A. Glawe & J. L. Crane (1987), Mycotaxon **29**: 101-112. => *Tubakia dryina*: on the host material conidiogenous cells (5-)6-7(-7.5) x 2.5-3(-4)  $\mu$ , conidia 8-14(-16) x (4-)6-10(-12)  $\mu$ ; on PDA conidiogenous cells (6-)8-12.8(-14.4) x 4-5.6(-9.6)  $\mu$ , conidia 12-16(-17.4) x (6-) 7.2-8.8(-9.2)  $\mu$ . // J. P. Jones & G. E. Holcomb (1978), Mycologia **70**: 1212-1216. Conidium ontogeny and cytology of *Tubakia dryina* from Louisiana hardwoods. // O. Holdenrieder & T. Kowalski (1989), Mycol. Res. **92**: 166-169. Pycnidial formation and pathogenicity in *Tubakia dryina*.

**Photo**

page 46

1077 = Habit. Scutella on b/c-medium.

1078, 1079 = Scutella on b/c-medium.

1080, 1081, 1082 = Partly degenerated scutella on b/c-medium.

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1083, 1084 = Partly degenerated scutella on b/c-medium.

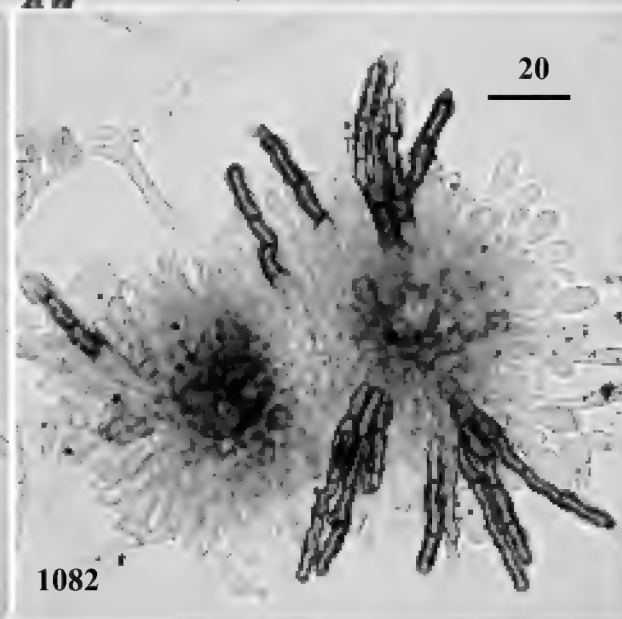
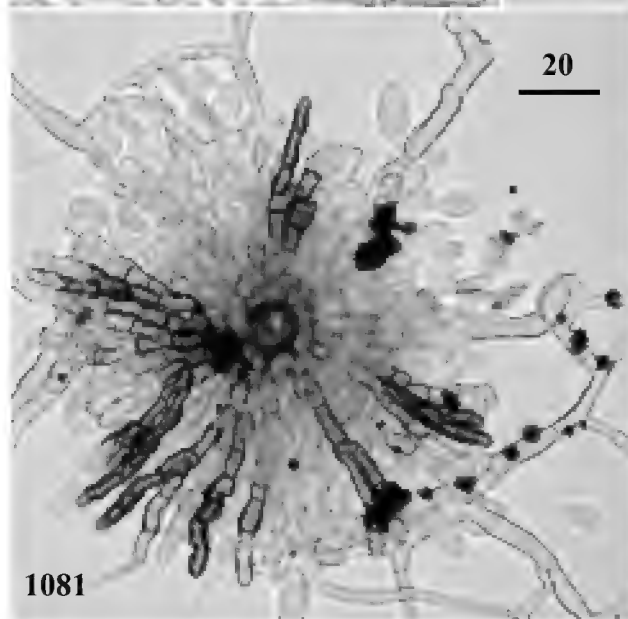
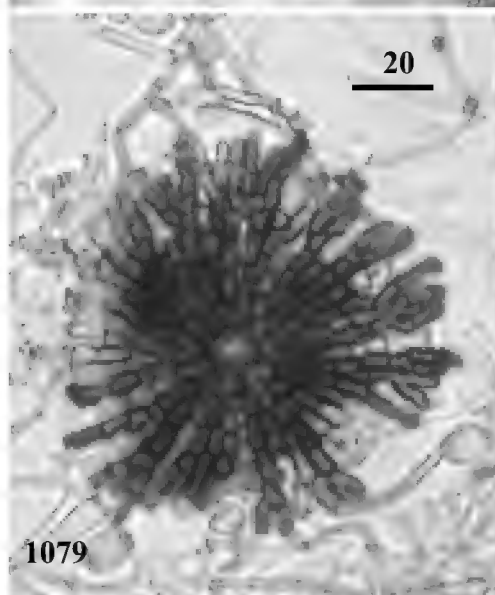
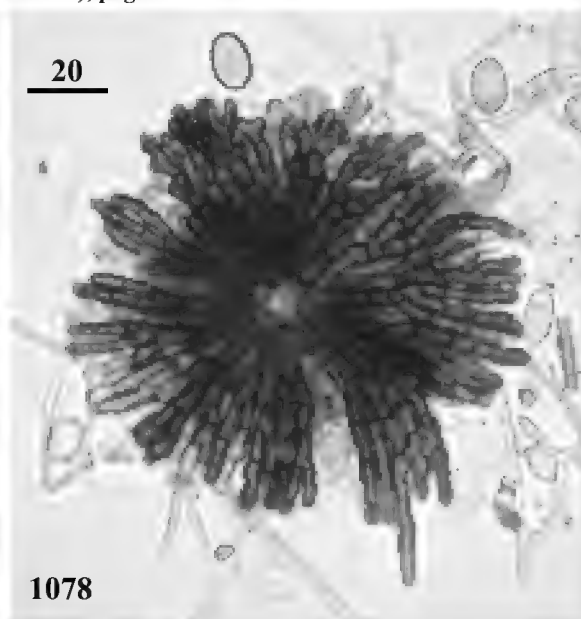
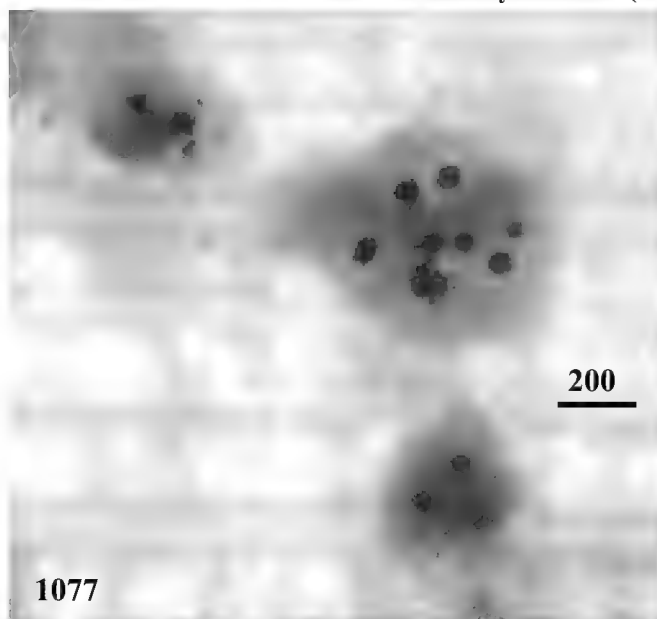
1085, 1086 = Scutella on b/c.

1087, 1088 = Partly degenerated scutella on b/c-medium.

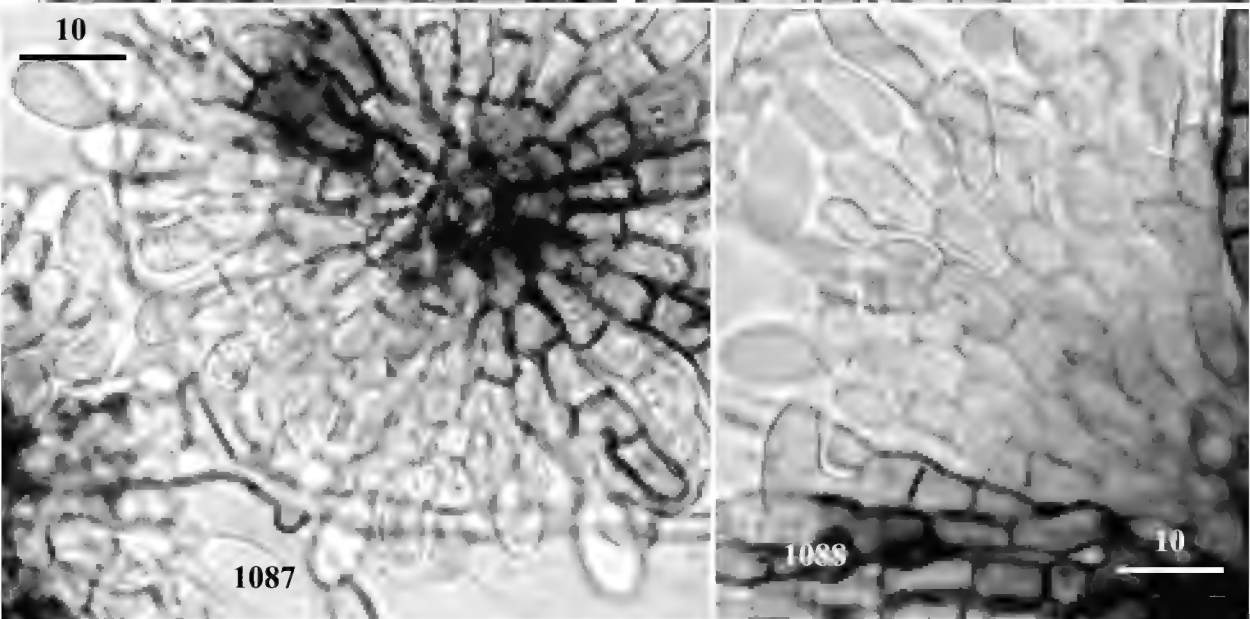
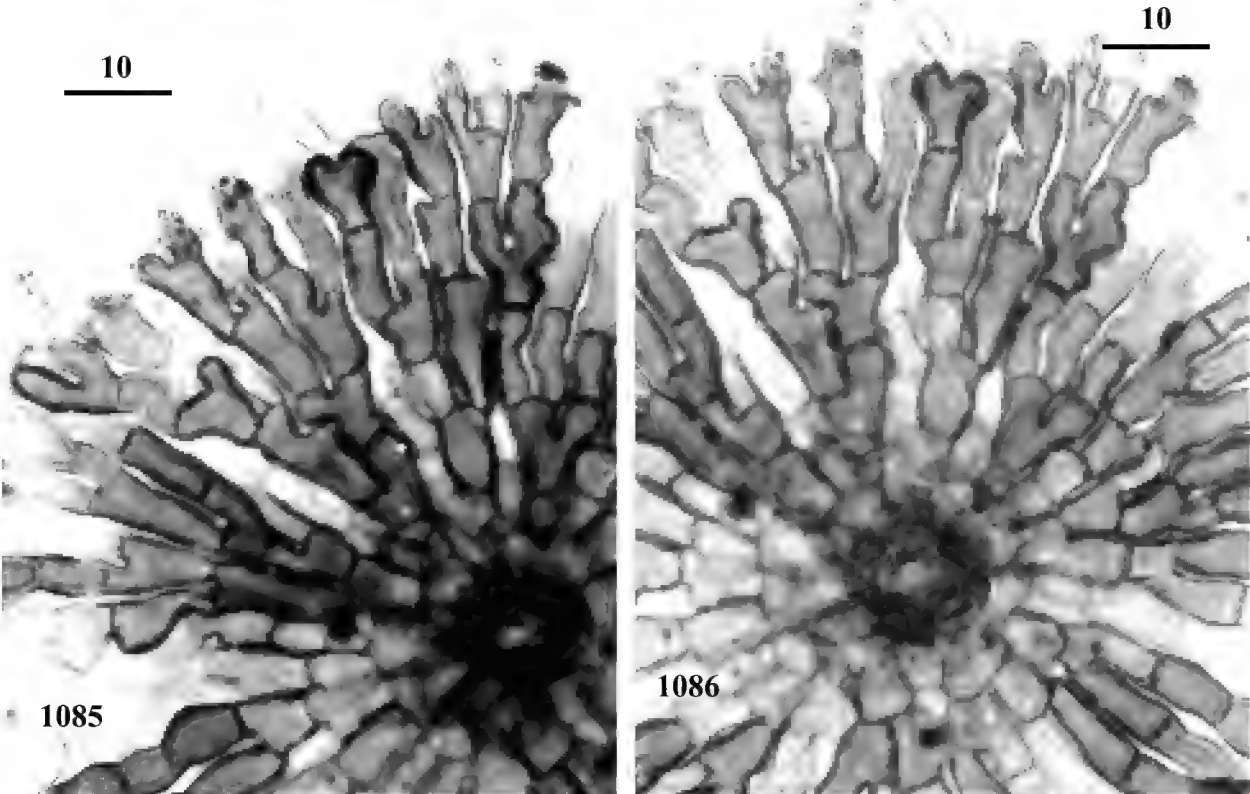
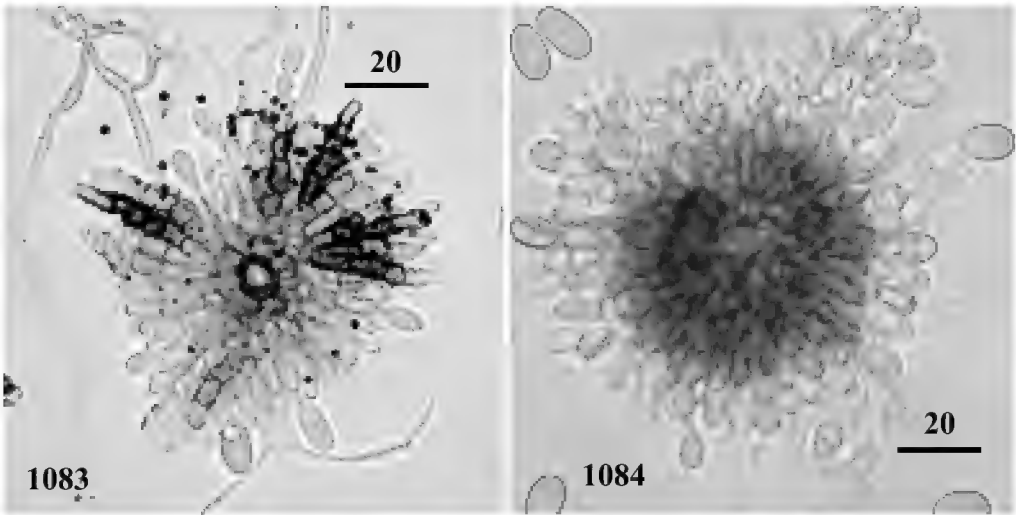
page 48

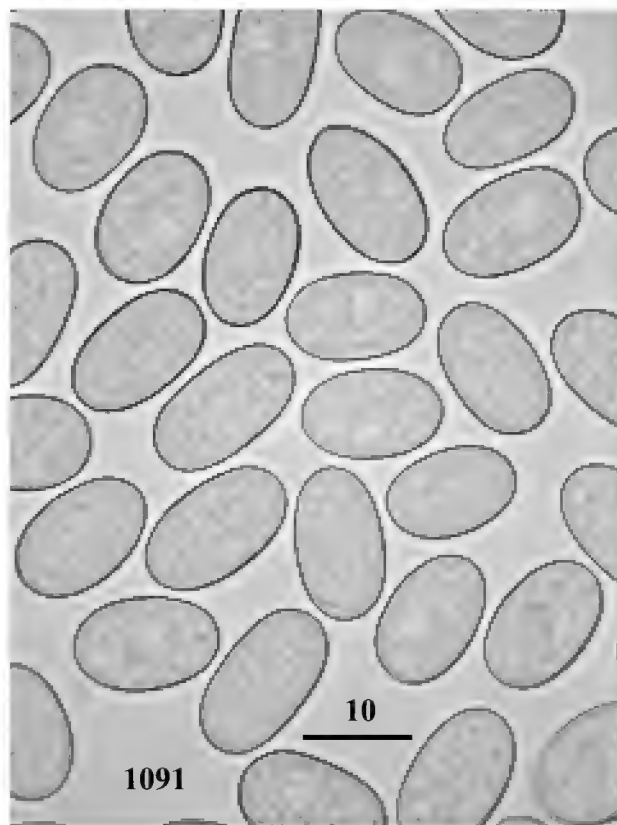
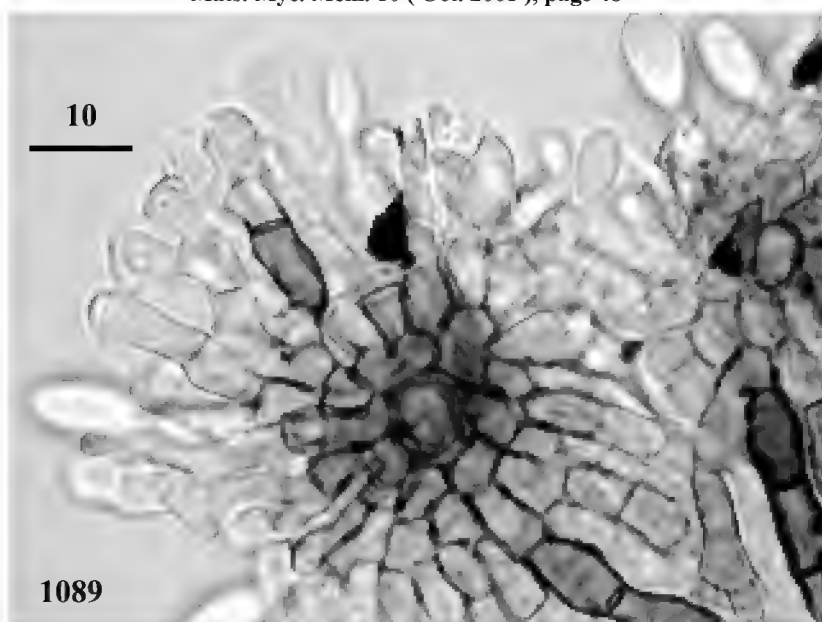
1089 = Partly degenerated scutellum on b/c-medium.

1090, 1091 = Conidia from b/c-medium.









**1350 *Hainesia lythri*** ( Desmaz. ) von Hoehnel (1906), Sitz. Akad. Wiss. Wien. **115**: 687.

**Descr** Coloniae in b/c-medio diffusae, sine hyphis aeriis, conidiomatibus dense dispersis. Conidiomata maturitate a latere vis. cupulata, ab apice vis. circularia, superficialia, sessilia, solitaria ad gregaria, aspectu gelatinosa, sine massa conidiorum 120-300  $\mu$  in diam., cum massa conidiorum 160-400  $\mu$  diam.; fundo modice brunnea textura angulari: parietes laterales ( excipula lateralia ) membranacei, textura porrecta, inferne cellulis cylindricis pallide brunneis 6-15  $\mu$  longis 3-5  $\mu$  latis, marginem versus cellulis angustescens et pallescentibus; ad marginem hyphis liberascens et transformati in hyphas filiformes 20-50  $\mu$  longas 1  $\mu$  latis. Conidiophora e pariete omnino interiore orta, cylindrica, 7-14 x 1.5-2.5  $\mu$ , 0-1 septata, laevia, hyalina ad pallide brunneola; cellulae conidiogenae ad apices conidiophorum terminaliter integratae vel in 2-5 fasciculis ad apices conidiophorum dispositae, cylindricae, 10-27(-45) x 1.0-1.5  $\mu$ , laeves, hyalinae, ad ores enteroblasticae-phialidicae parietibus periclinalibus spissescens. Conidia allantoidea utrinque subacuta, 5-7 x 1.5-2  $\mu$ , unicellularia, laevia, atro-aurantiaca ad brunnea mucosa in massa.

Coloniae in CMA diffusae, sine hyphis aeriis, incoloratae ad pallide brunneolae, conidiomatibus plusminusve in circulis concentricis.

**Hab** MFC-21080. E solo sylvae ( arbores dicotyledonum ); Takao, Kyoto, Japan; March 2000.

**Ref** C. L. Shear & B. O. Dodge (1921), The life history and identity of "*Patellina fragariae*", "*Leptothyrium macrothecium*", and "*Peziza oenotherae*". Mycologia **13**: 135-170 + Pl. 8-10. => *Hainesia lythri* described and illustrated as the conidial stage of *Pezizella lythri* ( Desm. ) Shear & Dodge. / A "structural parallelism" exists between *Hainesia* and *Pezizella lythri*. // M. E. Swift (1930), Mycologia **22**: p. 165-166. A new species of *Chaetomella* on rose. => p. 165 *Chaetomella raphigera* sp. nov.: conidia 4-8.1 x 1.4-3 ( av. 5.46 x 2.1 )  $\mu$ . // B. O. Dodge (1930). Mycologia **22**: 169-174 + Pl. 20-21. Development of the asexual fructifications of *Chaetomella raphigera* and *Pezizella lythri*. => Striking resemblance between *Hainesia*-form of *Chaetomella raphigera* and *Hainesia*-form of *Pezizella lythri*. // J. A. von Arx (1970). The genera of fungi sporulating in pure culture, J. Cramer. => p. 185. *Hainesia* Ellis & Sacc., Syll. Fung. **3**: 699 (1884). *Hainesia rhoina* ( Sacc. ) Ellis & Sacc., = *Hainesia lythri* ( Desm. ) Hoehnel. Teleomorph : *Discohainesia oenotherae* ( Cooke & Ellis ) Nannf. // T. R. Nag Raj (1977), Icones Generum Coelomycetum **8**: p. 19. // B. C. Sutton & A. K. Sarbhoy (1976). Trans. Br. mycol. Soc. **66**: 293-303. => conidia ( only pycnidia described ) 4-7 x 1.5-2.5  $\mu$ . // B. C. Sutton (1980), The Coelomycetes, p. 552. => *Hainesia lythri*, lectotype species: conidiomata up to 200 mm diam.; conidiophores up to 50  $\mu$  long, 1-2  $\mu$  wide; conidia 5-7.5 x 1.5-2  $\mu$ . // M. E. Palm (1991). Mycologia **83**: 787-796. // G. Vobis et al. (1992), Bol. Soc. Argent. Bot. **28**: 205-211. => *Chaetomella raphigera* is pleomorphic, having pycnidia and sporodochia: conidia from pycnidia 5.5-6.4 x 1.5-1.8  $\mu$ ; conidia from sporodochia 4.5-5.5 x 1.2-1.8  $\mu$ .

#### Photo

page 50

1092, 1093, 1094 = Conidiomata on CMA.

1095 = Conidiomata on CMA, conidia washed away, showing cupulate conidiomata.

1096, 1097 = Wall of conidioma, seen from outside.

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1098 = Wall of ascoma, seen from outside. ( by phase contrast )

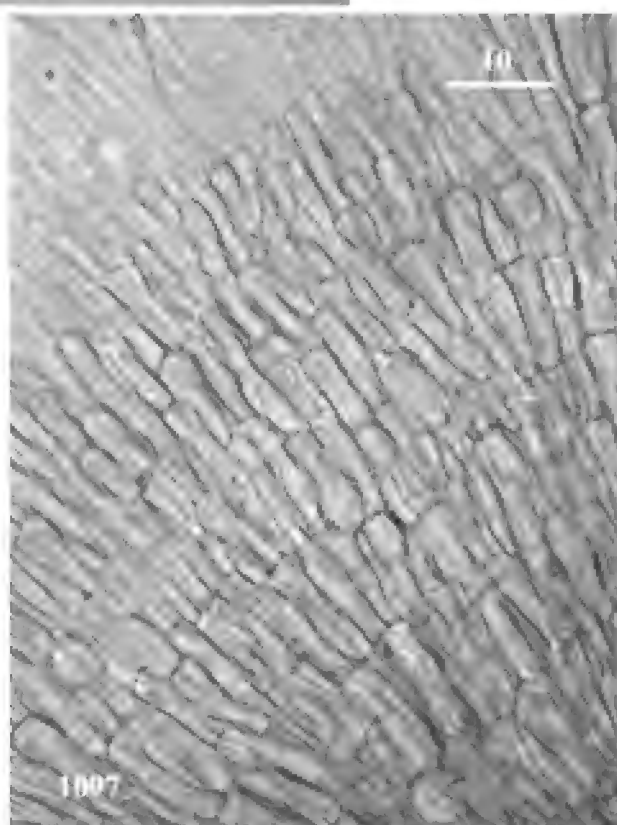
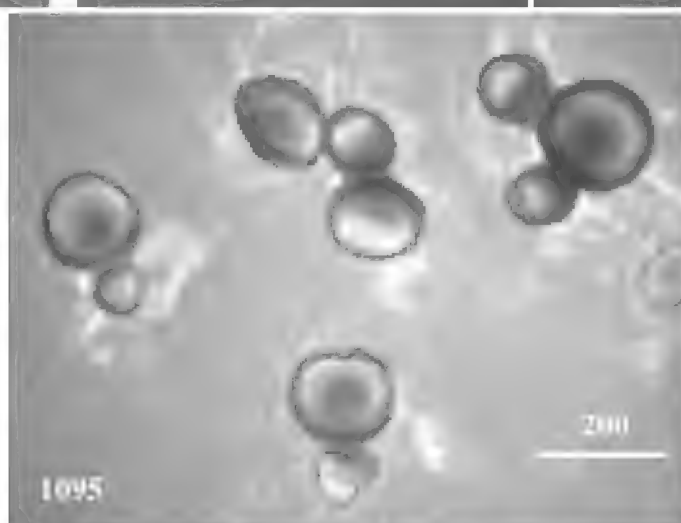
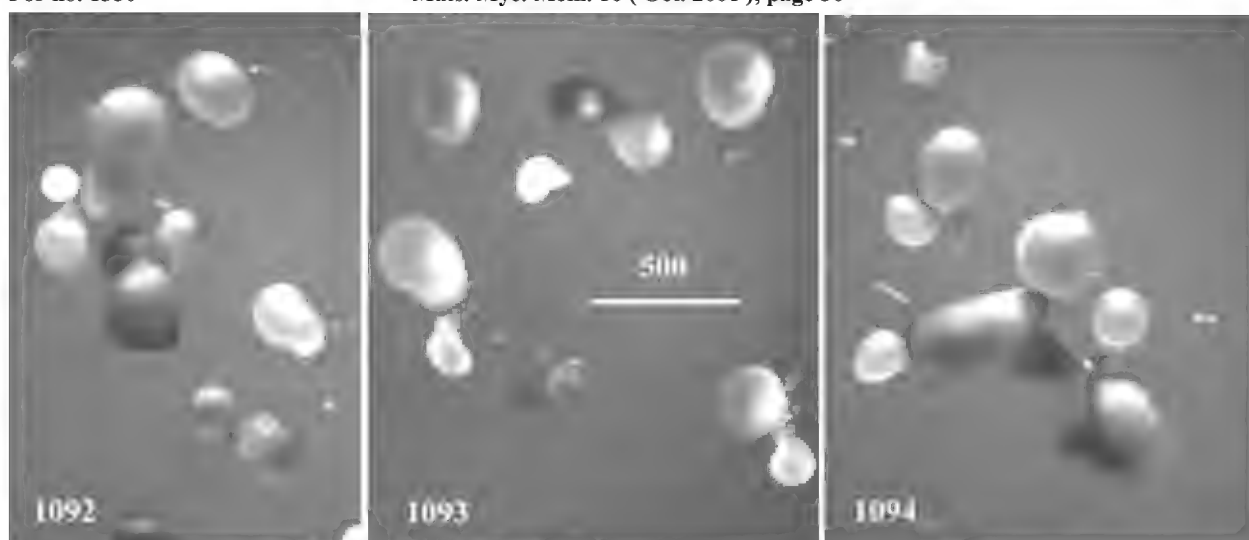
1099, 1100 = Conidiophores and conidiogenous cells, on inside of conidiomata. ( by phase contrast )

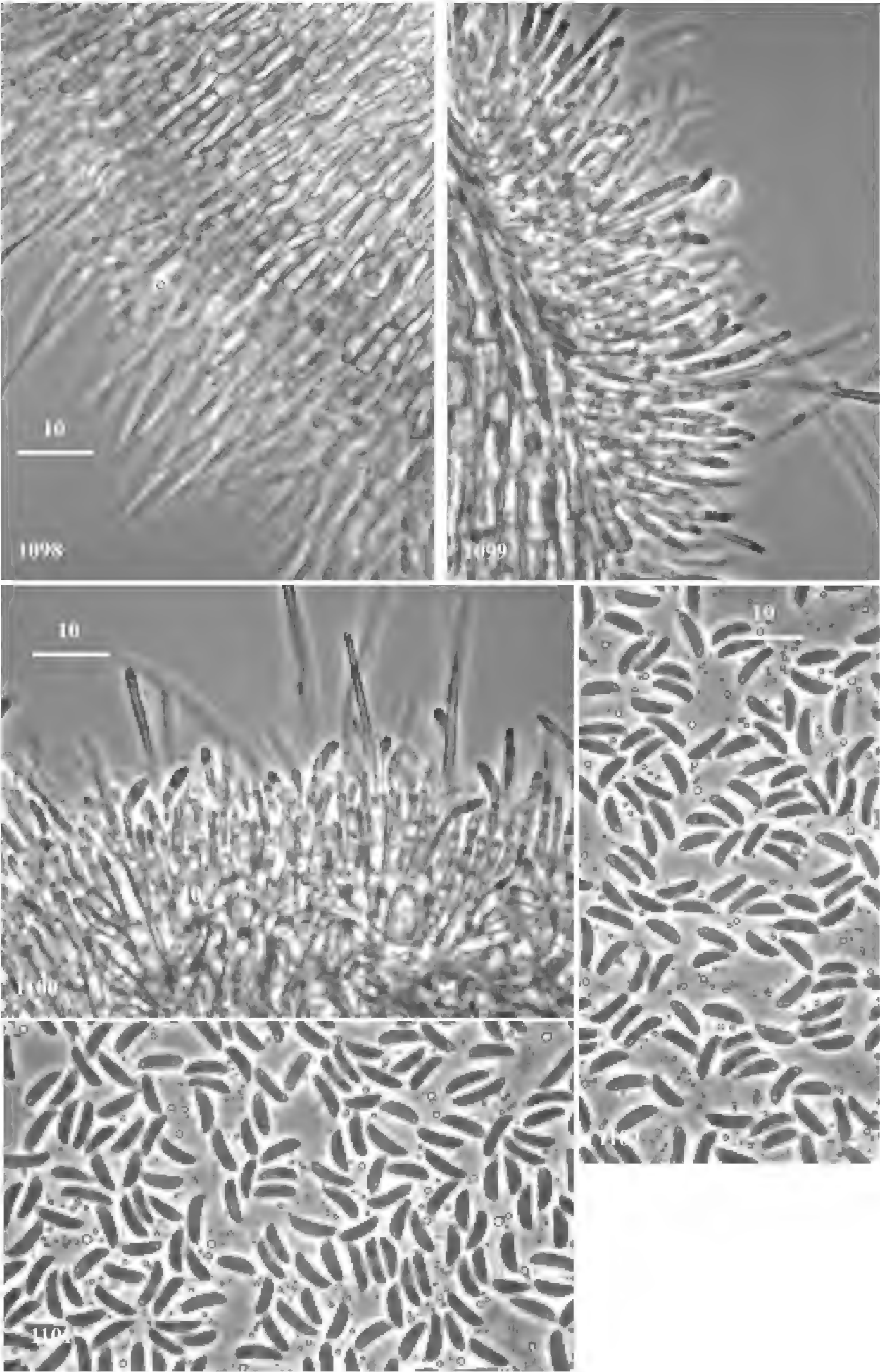
1101, 1102 = Conidia. ( by phase contrast )

page 205 ( color plate )

1778, 1779, 1780 = Conidiomata on CMA.

1781 = Conidiomata on CMA, conidia washed away, showing cupulate conidiomata.







**1351 *Zelosatchmopsis sacciformis*** ( Castaneda ) Nag Raj et Castaneda, apud Saikawa, Castaneda, Kendrick & Nag Raj (1991), Canad. J. Bot. **69**: 633.

= = *Satchmopsis sacciformis* Castaneda (1987), Fungi Cubenses **II**: 18.

**Descr** Coloniae in b/c-medio diffusae, arachnoideae, albidae, conidiomatibus brunneis abundanter dense dispersis. Conidiomata cito maturescentia ( in 10 dies ), superficialia, dissita ad gregaria, cupulata ad infundibuliformia, sessilia, ab apice vis. circularia, 25-100  $\mu$  diam., e latere vis. 25-75  $\mu$  profunda. Parietes conidiomatum omnino una cellula crassi, pallide brunnei; ad fundos planos ab apice vis. cellulis angularibus fertilibus compositi; a latere vis. textura prismatica, ex cellulis cylindricis pallide brunneis 3-5  $\mu$  latis et margineum versus plusminusve progressive e 3  $\mu$  ad 10(-18)  $\mu$  longiorescentibus compositi; cellulis marginalibus brunneis crassitunicatis. Conidiophora desunt. Cellulae conidiogenae sunt cellulae fundi conidiomatis, pallide brunneae, aspectu apicali angulares isodiametricae, a latere vis. oblongae ad angulares, 4-7  $\mu$  altae 3-4  $\mu$  crassae, 1 ( raro 2 ) ore circulari 1-1.5  $\mu$  diam., enteroblastico-phialidico, pariete periclinali spissescenti. Conidia falcata, medio 1-septata, basi calce inconspicua ( more conidorum *Fusarii* ), laevia, hyalina, 27-40 x 1.5-2.5  $\mu$ , cupulam ut in massa albida complentia.

Coloniae in CMA modice crescentes, brunneo-albae, tenuiter coactae, margine diffuso, conidiomatibus dispersis. Hyphae vegetativae ramosae, septatae, 1-3  $\mu$  latae, laeves, hyalinae ad pallide brunneae.

**Hab** MFC-21048. Carioso ramunculo indet. arboris dicotyledonis in fundo sylvae densae ( praecipue arbores dicotyledonum ); Sukau, Sabah, Malaysia; Nov. 30, 1999.

**Mem** *Satchmopsis brasiliensis* Sutton & Hodges ( in Nova Hedwigia **26** : p. 3, 1975 ) has some similarity to the present species.

**Ref** T. R. Nag Raj (1993), Coelomycetous anamorphs with appendage-bearing conidia, Waterloo, Canada, p. 992-994. => *Zelosatchmopsis sacciformis*: conidia mostly 1-septata, including appendage 23-33 x 1-2 [ 28 x 1.5 ]  $\mu$ ; basal appendage cellular, eccentric, somewhat attenuated, 3-5  $\mu$  long.

**Photo**

page 53.

1103, 1104 = Habit. Conidiomata on b/c-medium, conidia were washed away.

1105, 1106, 1107 = Squashed conidiomata.

1108 = Conidioma, in side view.

page 54

1109, 1110, 1111 = Bottom view of conidiomata, seen from the above.

1112 = Bottom view of a conidioma, seen from the outside.

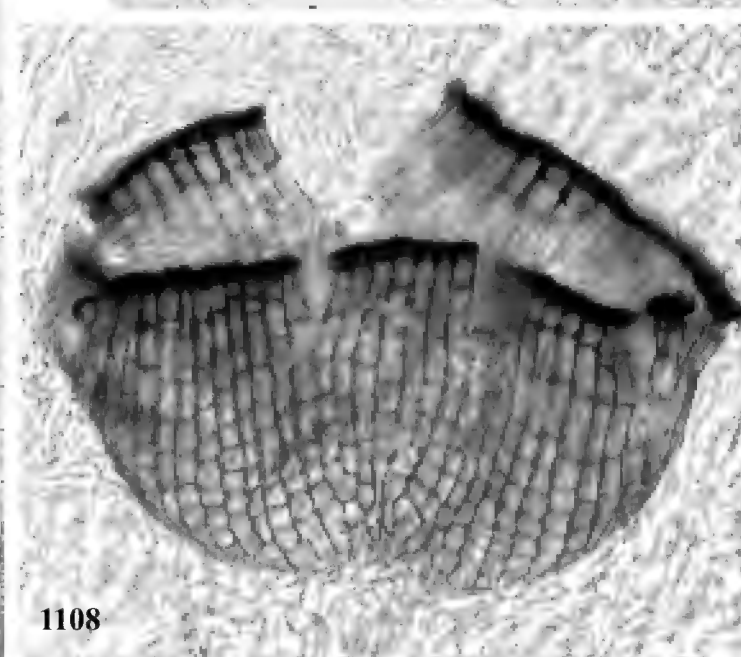
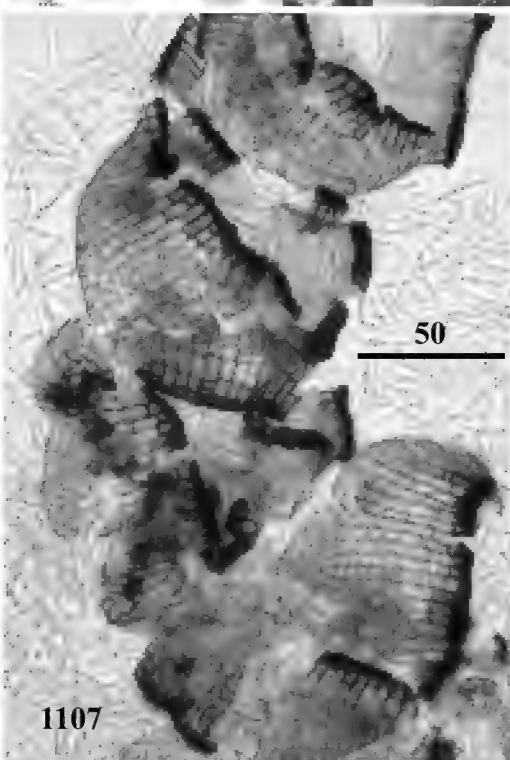
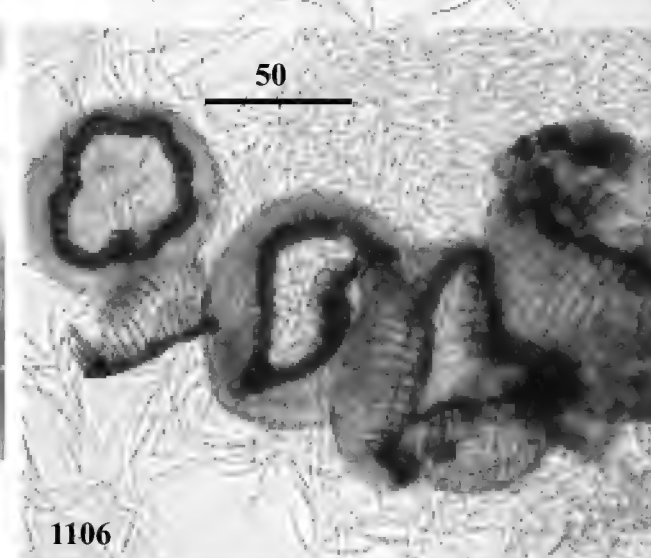
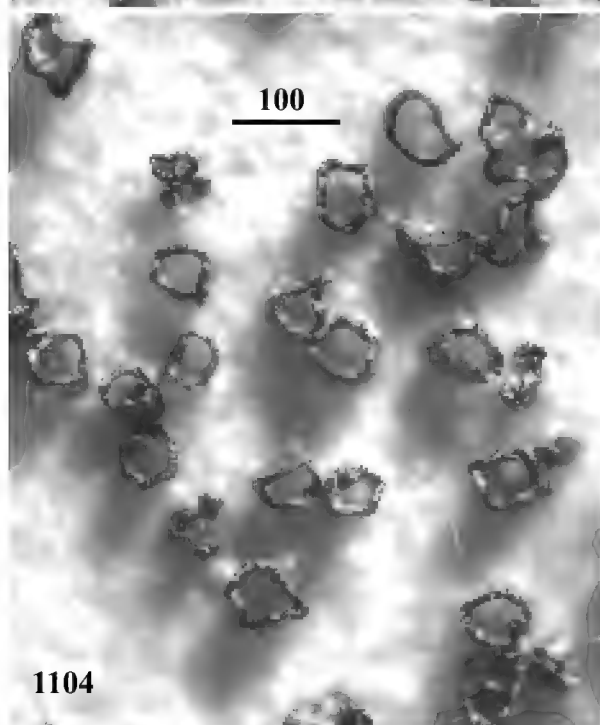
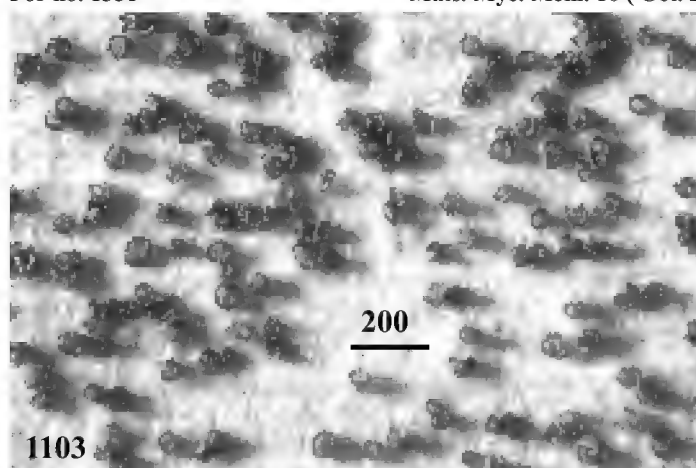
1113, 1114 = Side view of conidiomata, seen from the outside.

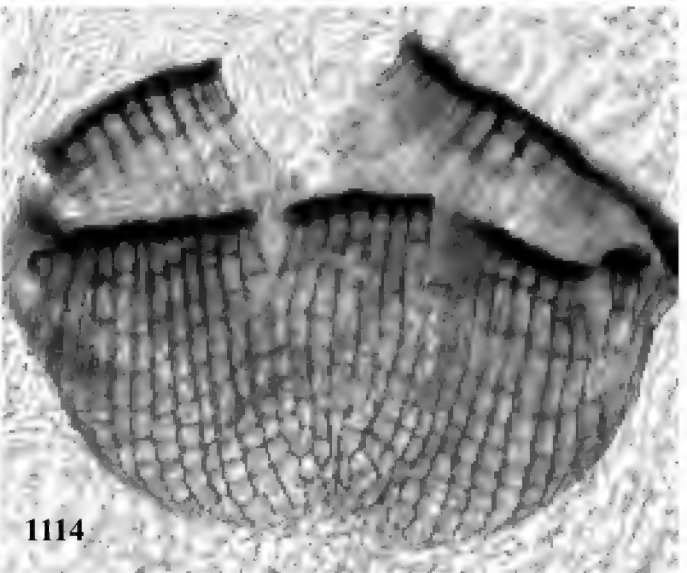
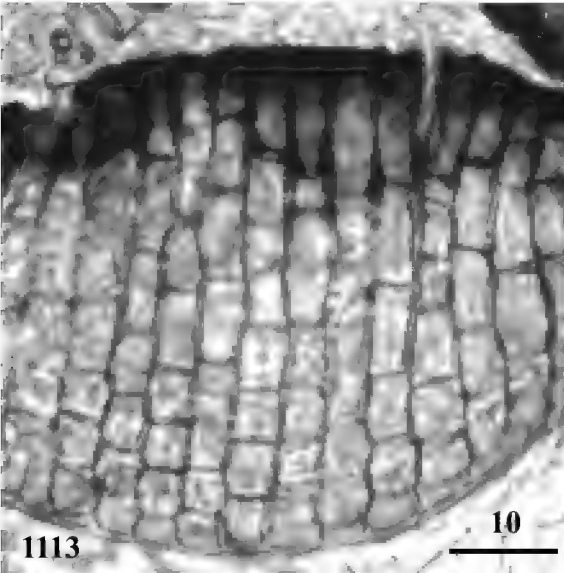
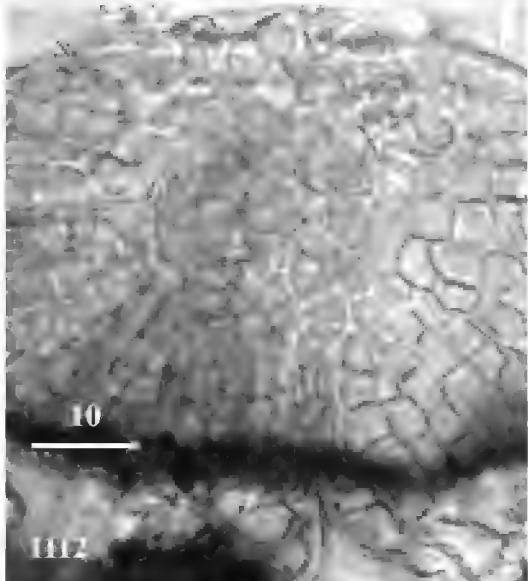
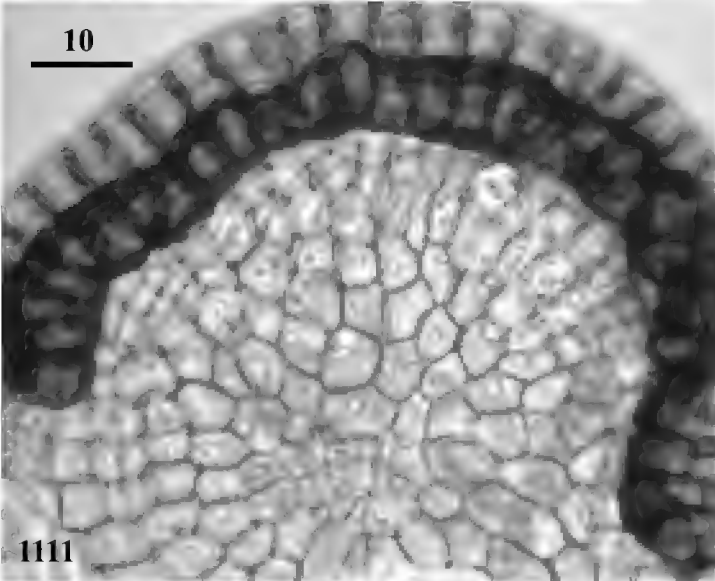
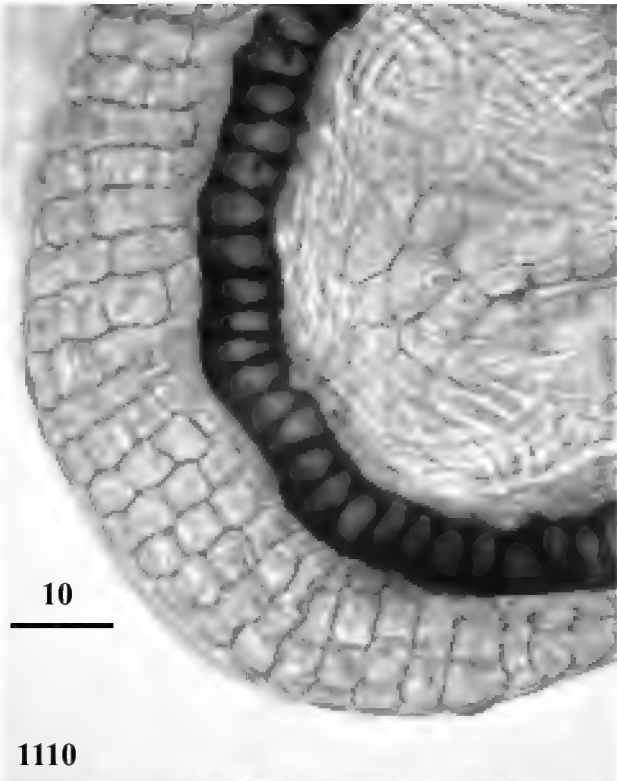
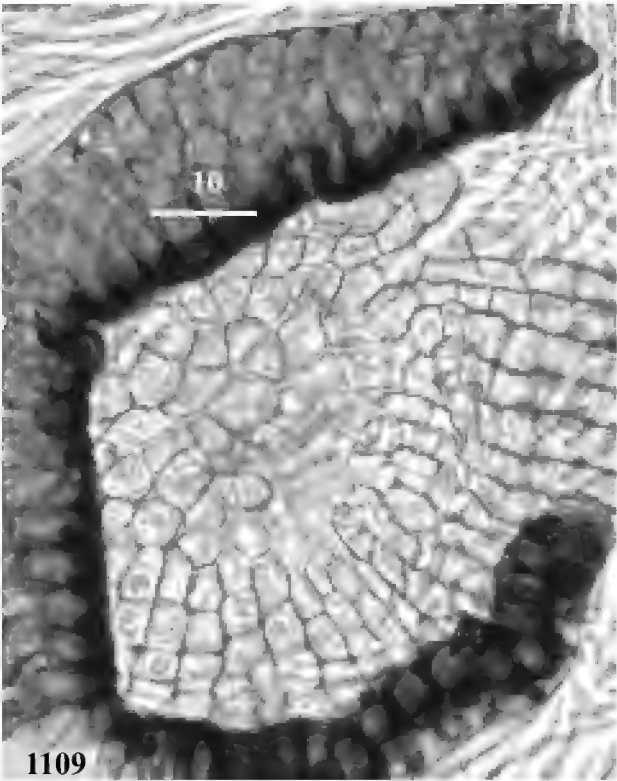
page 55

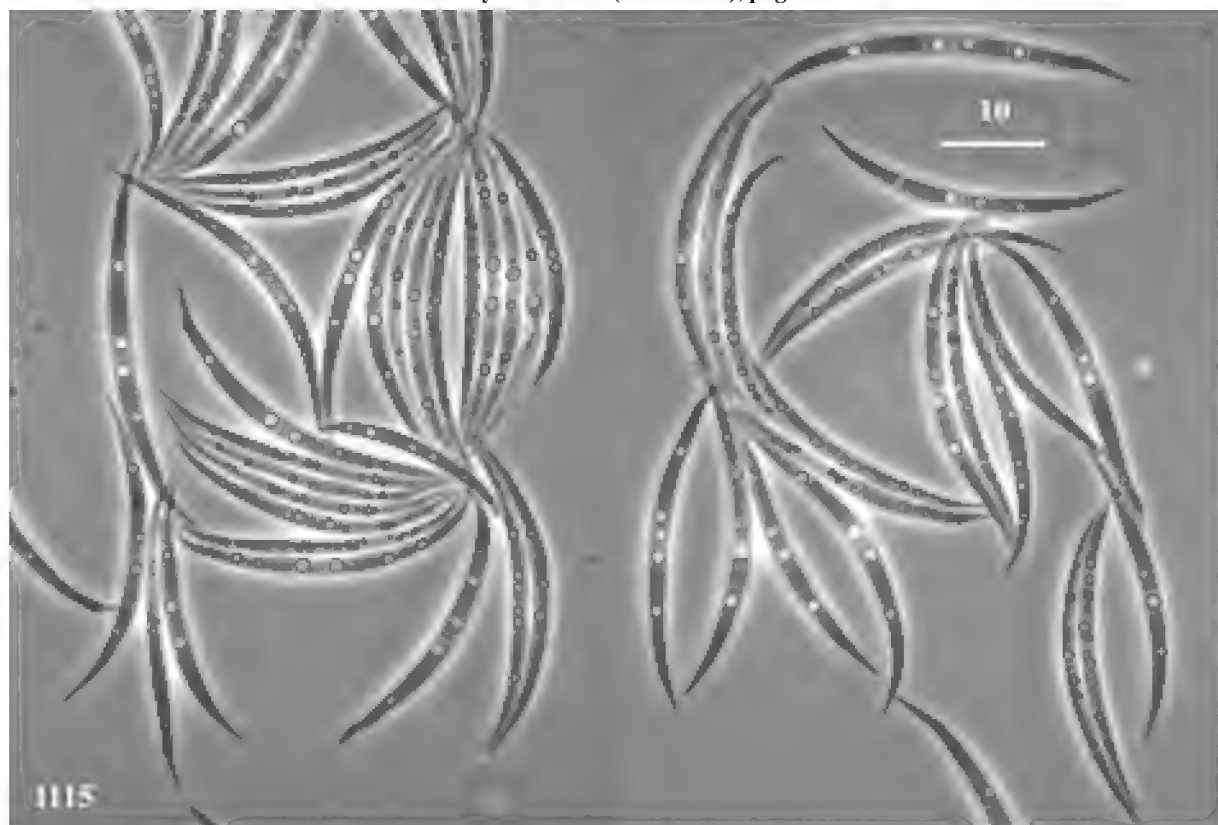
1115 = Conidia. ( by phase contrast )

page 206 ( color plate )

1782, 1783 = Habit. Conidiomata on b/c-medium, conidia were washed away.







**1352 *Coniothyrium dactyloides*** Matsushima (1996), Mats. Myc. Mem. 9: p. 8, no. 1257.

**Descr. emend.** Coloniae in b/c-medio diffusae, fere sine hyphis aeriis. Conidiomata pycnidioidea, subcuticularia, dispersa, separata, depresso globosa, 60-240  $\mu$  in diam, aspectu atera ob conidia interna: stromata basalia pulvinata pseudo-parenchymatosa textura angulari pallide brunnea, e cellulis 4-8  $\mu$  diam. composita: parietes externe vis. textura angulari, 1-2 cellulis crassi, cellulis angularibus 4-8  $\mu$  diam., pallidissime brunneis compositi; parte superiore tholiformi, 1-2 cellulis crassi, sine ostiolo praeparato, maturitate late refringenti, massas ateres conidiorum exilientia. Conidiophora deficientia. Cellulae conidiogenae e supernis cellulis stromatis oriundae, subglobosae ad angulares, 5-10  $\mu$  altae 5-9  $\mu$  latae, hyalinae ad subhyalinae, producentes conidia per singularem ( interdum duo ) holoblastice conidiogenum orem, quae primo sessile postea per successivam proliferationem tubulariter elongasens, itaque in collum annellatum ( spatiis inter se 1-2.5  $\mu$  ), 2-10  $\mu$  longum et 1.5-3  $\mu$  latum transformatum. Macroconidia globosa ad obovoidea, plusminusve angularia, 15-19  $\mu$  in diam. ad 16-23 x 12.5-17  $\mu$ , pariete 1  $\mu$  crasso, striis longitudinalibus ob fissuis stratum extimum, basi truncata 2.0-4.0  $\mu$  lata, cum minuto tubulari vestigio cellulae conidiogenae. Microconidia globosa ad obovoidea, 5-5.5  $\mu$  diam. ad 6-7.5 x 4.5-5.5  $\mu$ , non crassitunicata, laevia ( sine striis ), subhyalina ad pallide brunnea, basi cicatrice obscura 1-1.5  $\mu$  diam. Cellulae conidiogenae pro microconidiis similes earundem pro macroconidiis, sed frequenter proportionaliter parviores. Numerosa conidiomata tantum macroconidiis; aliqua conidiomata macroconidiis et microconidiis, sed macroconidia quam microconidia numeroissima; conidiomata tantum microconidiis desunt. Conidiomata cito ( aetate unius hebdomadis ) maturantia.

Coloniae in CMA diffusae, laxe floccosae, albae, in area centrali conidiomatibus ut puncturis ateris. Hyphae vegetativae ramosae septatae 2-5  $\mu$  latae, hyalinae, albae in massa.

**Hab** MFC-21045. E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Kobe Municipal Arboretum, Kobe, Japan; Sept. 1999.

**Mem** Whether the conidial ontogeny is phialidic or annellidic is not easy to determine because of minute conidiogenous loci. Judging the elongating fertile necks and the conidial basal scars, annellidic ontogeny seems to be feasible.

**Ref** B. C. Sutton (1980). The Coelomycetes, C.M.I.

**Photo**

page 57

1116, 1117 = Habit. Conidiomata on b/c-medium.

1118, 1119 = Conidiomata from CMA, most conidia washed away.

1120 = Dark conidia seen through intact upper wall of young conidioma.

1121 = Peridium, in surface view.

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1122, 1123, 1124, 1125, 1126, 1127, 1128, 1129, 1130 1131 = Conidiogenous cells, from squashed conidiomata. ( by phase contrast )

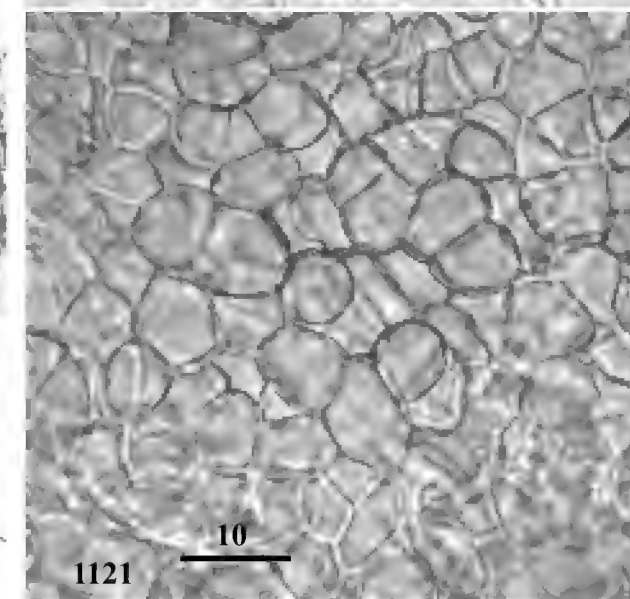
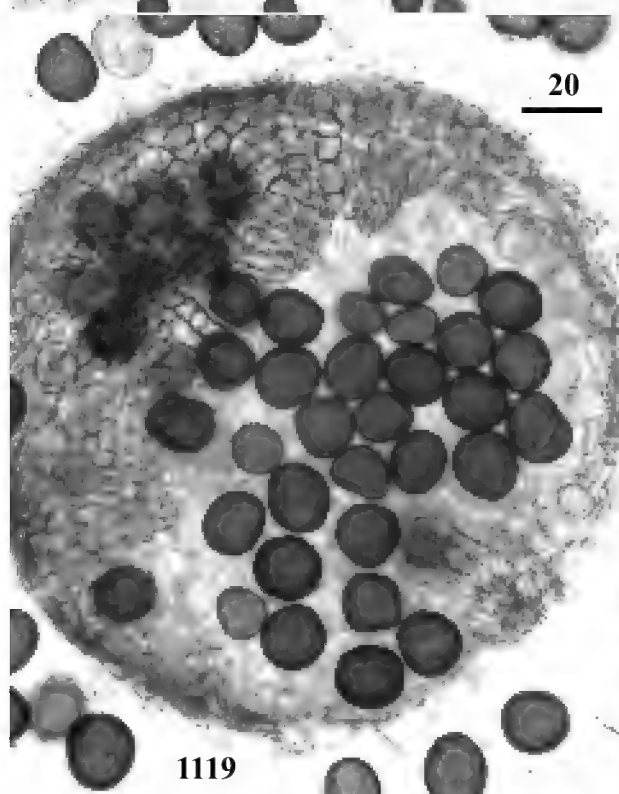
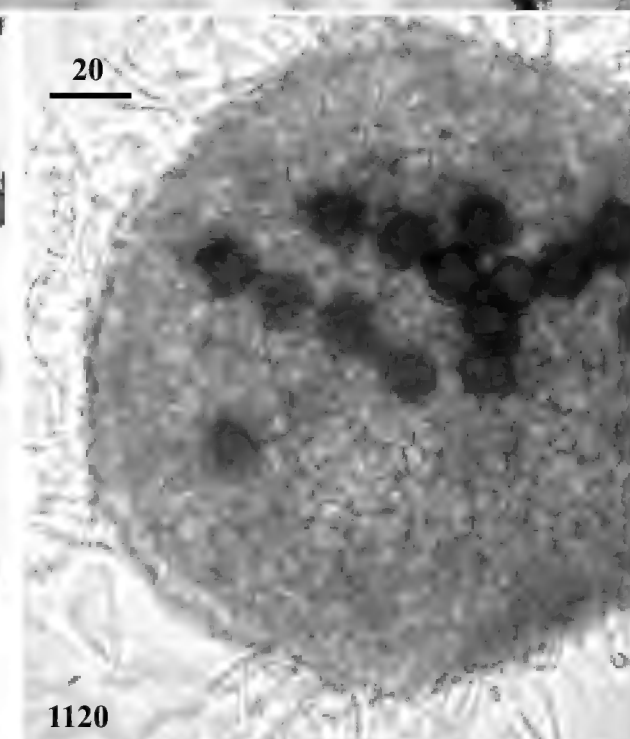
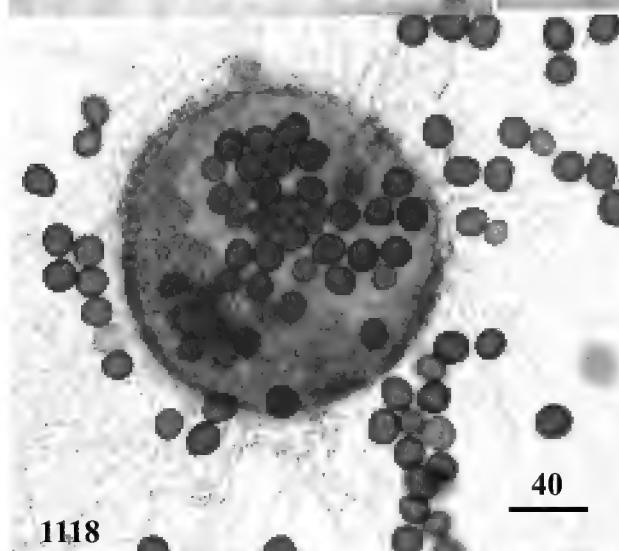
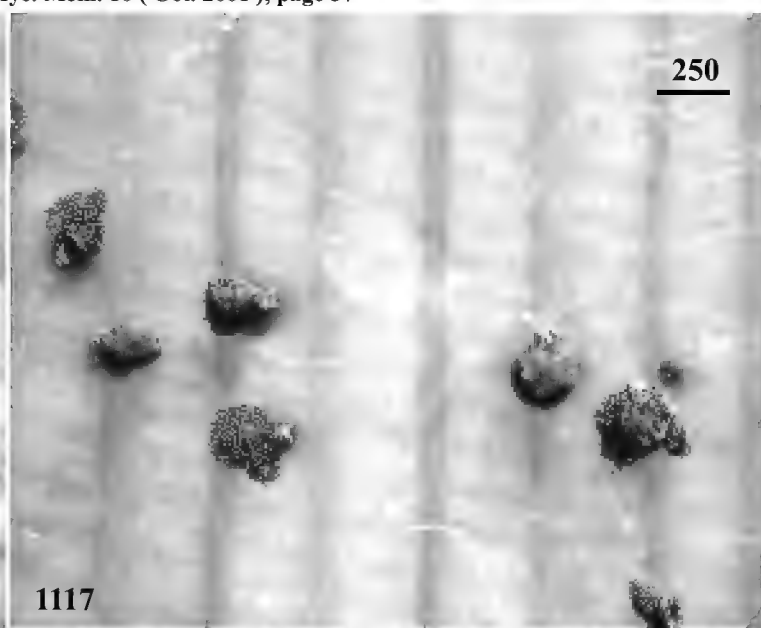
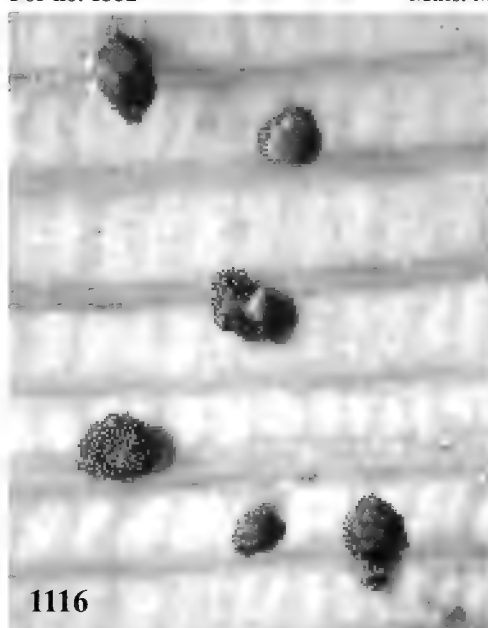
1132, 1133 = Microconidia.

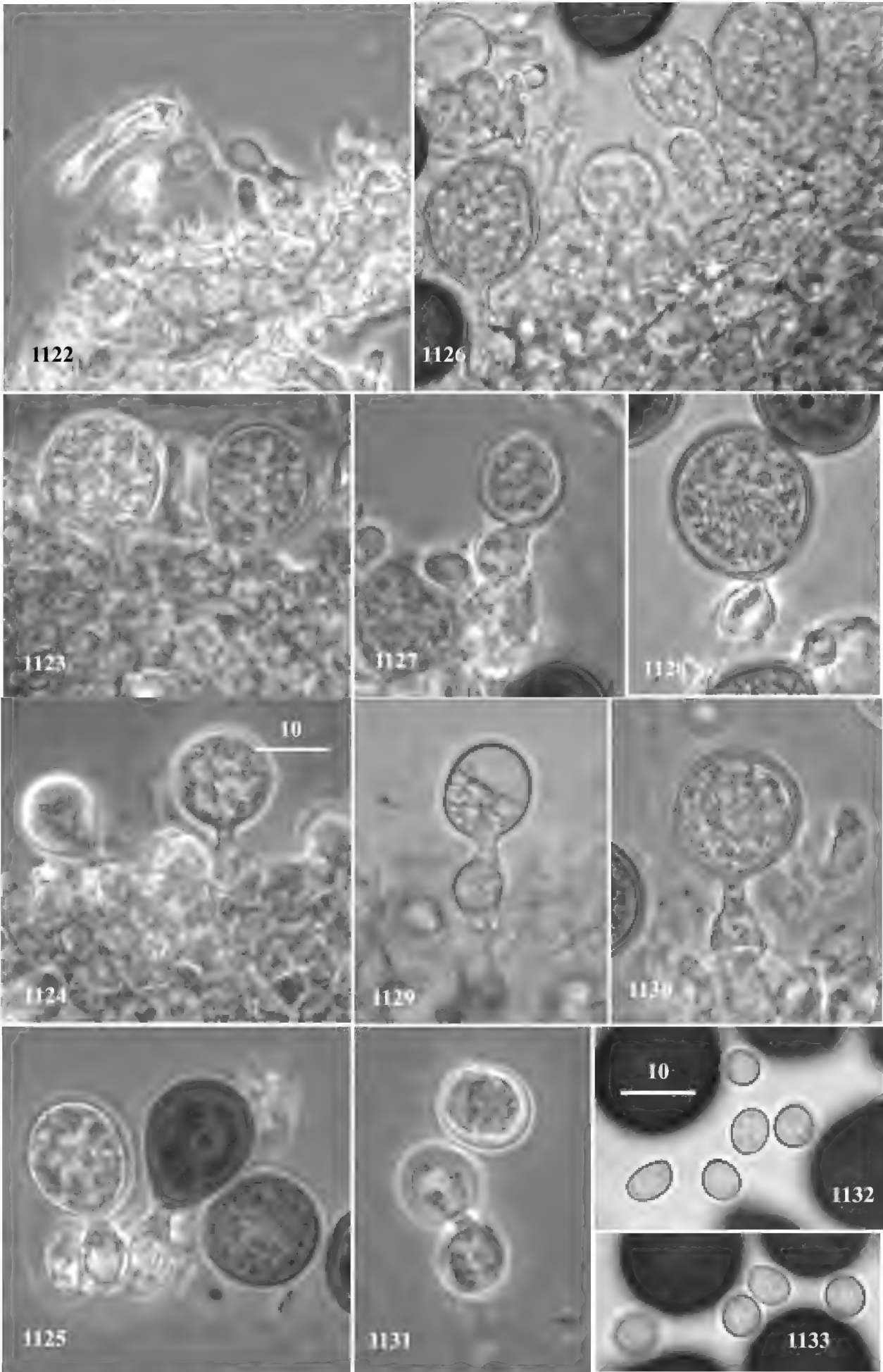
page 59

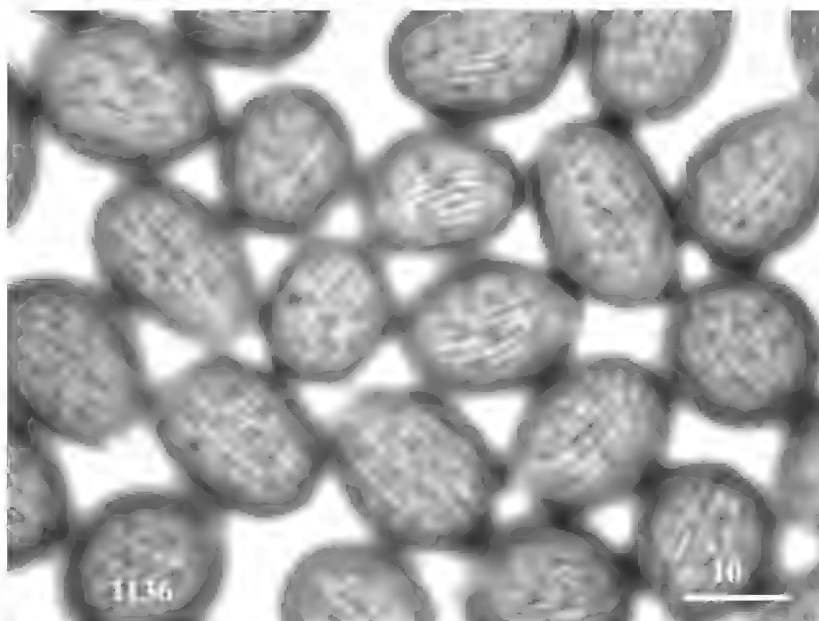
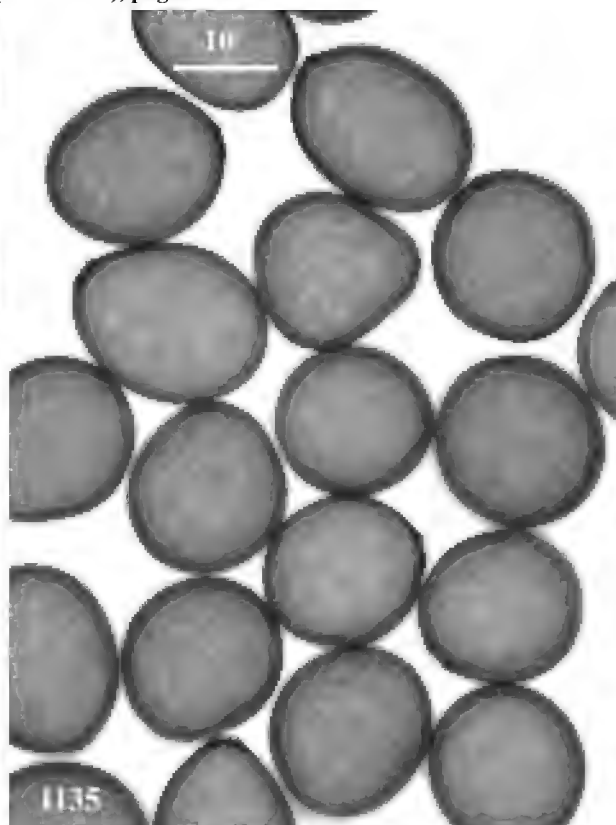
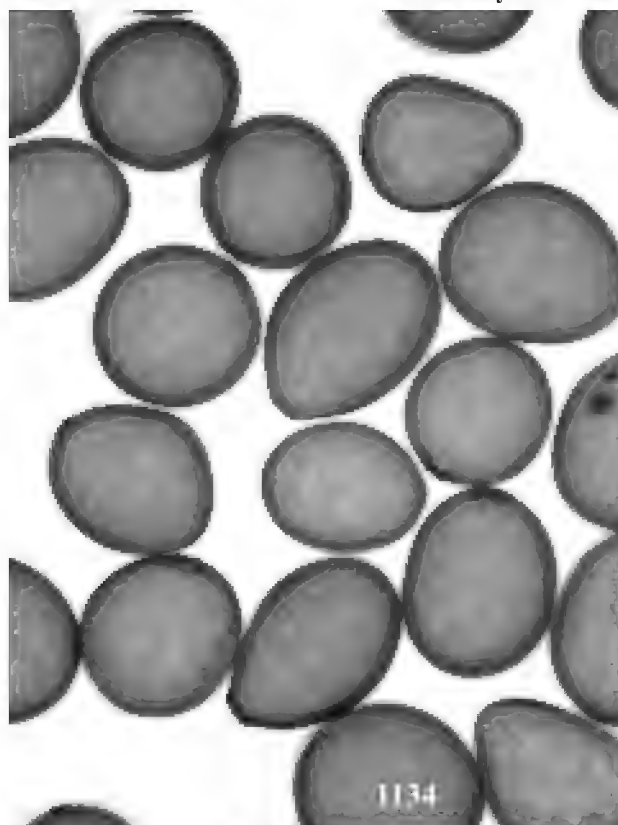
1134, 1135 = Conidia.

1136 = Conidia, focused on the surface ornamentation.









**1353 *Chaunopycnis alba*** W Gams (1980), Persoonia **11**: 75.

**Descr** Coloniae in b/c-medio diffusae arachnoideae ad laxe coactae, albae. Hyphae vegetativae ramosae septatae laeves, 0.7-4.5  $\mu$  latae, hyalinae, albae in massa. Conidiomata globosa ad subglobosa, 40-250  $\mu$  diam., sine ostiolo, superficialia vel in hyphis aeriis suspensa, dissita ad gregaria, alba, mollia, sicca. Peridium fragile, e hyphis ramosis intricatis septatis laevibus hyalinis 1-2.5  $\mu$  latis compositum. Conidiophora deficientia vel praesentia. Conidiophora ubi praesentia ex interioribus intricatis hyphis peridii introsum oriunda. Cellulae conidiogenae ex interioribus intricatis hyphis peridii introsum directe oriundae vel apices conidiophorum terminaliter integratae vel in fasciculis ad apices conidiophorum dispositae. Conidiophora vel cellulae conidiogenae totam cavitatem centrum versus dense obtegentia. Conidiophora ubi praesentia brevia cylindrica 2.5-6  $\mu$  longa 2-2.5  $\mu$  lata vel doliiformia 5-7  $\mu$  longa 3-5  $\mu$  lata. Cellulae conidiogenae ampulliformes vel lageniformes apice collo ( raro collis duobus ) minuto tubiformi; corpore 3-6 x 2-3.5  $\mu$ ; collo recto vel flexo 1-5 x 0.5-0.8  $\mu$ , phialidico, ad orem parietibus periclinalibus spissescens vix visibilibus, sine collarulis, vetustate collabentes. Cellulae conidiogenae plusminusve similes earundem *Tolypocladii nivei* ( = *T. inflati* ). Interdum cellulae conidiogenae 2-3 catenatae, velut *Sesquicillium* W. Gams. Conidia spherica, 1.7-2.1  $\mu$  diam., basi sine cicatrice, laevia, hyalina, maturitate cavitate impleta. Additamento ad conidiomata supra descripta, similes cellulae conidiogenae in hyphis vegetativis repentibus vel aeriis lateraliter singulariter disperse oriundae.

Coloniae in CMA relative lente crescentes, albae, tenuiter laxe coactae, conidiomatibus globosis dispersis et cellulis conidiogenis singularibus in hyphis dispersis, margine diffuso.

**Hab** MFC-21091. E solo sylvae ( arbores dicotyledonum ); Kobe Municipal Arboretum, Kobe, Japan; Sept. 1999.

**Ref** *Tolypocladium niveum* ( Rostrup ) Bisett (1983), Canad. J. Bot. **61**: 1311. / Mats. Myc. Mem. **4**: p. 19, no. 440.

**Photo**

page 61

1137 = Habit, conidiomata on CMA.

1138, 1139, 1140, 1141 = Conidiomata, from b/c-medium. ( by phase contrast )

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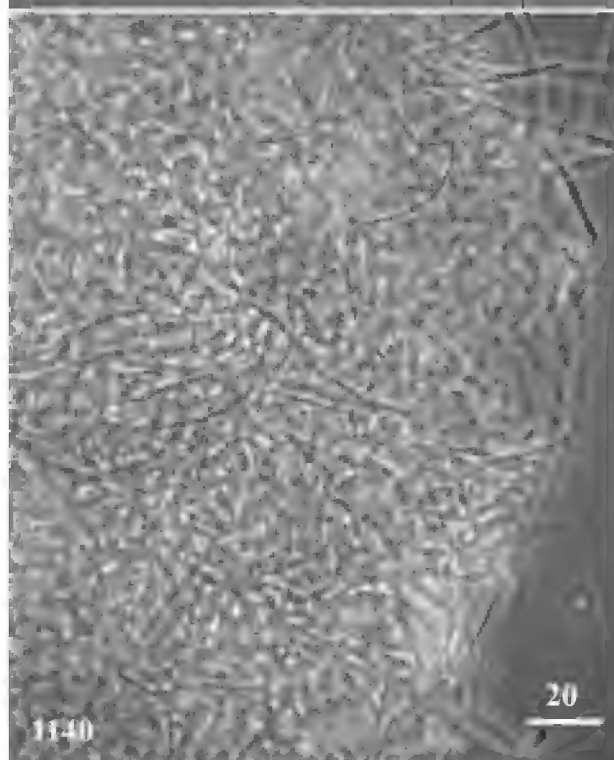
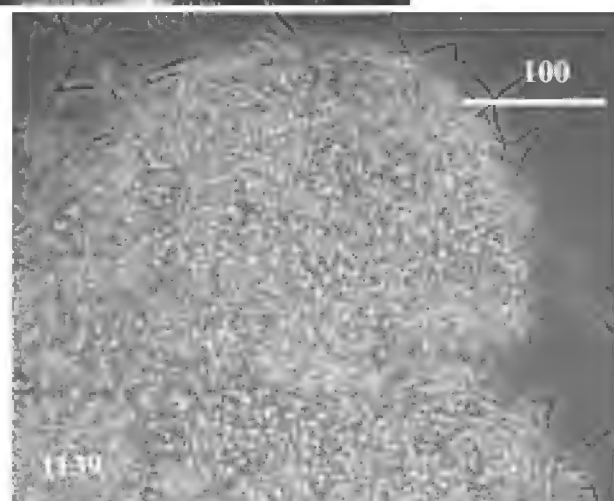
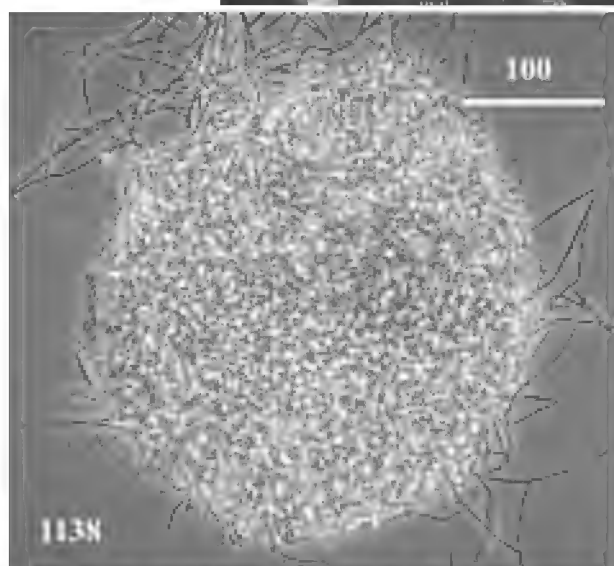
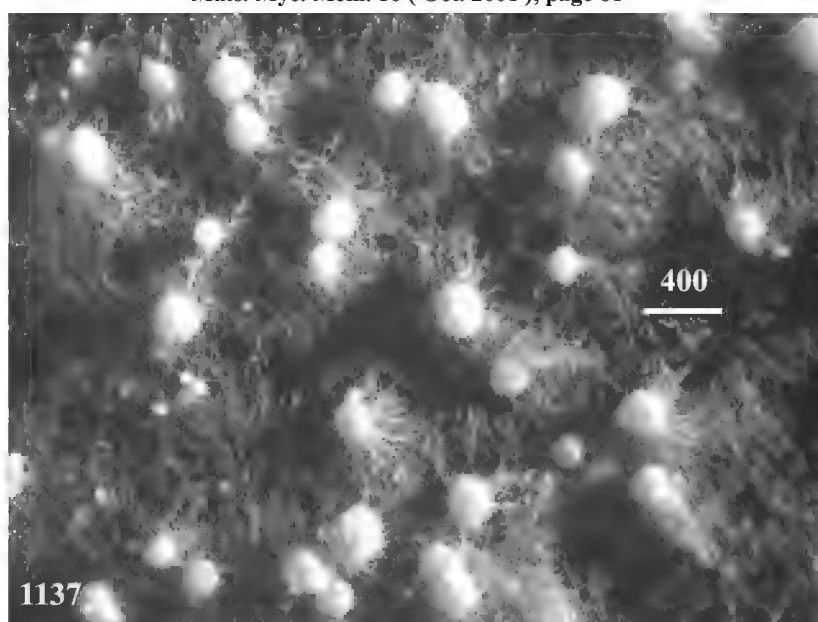
1142, 1143 = Part of peridia, showing the structure of textura intricata. ( by phase contrast )

1144, 1145 = Conidia. ( by phase contrast )

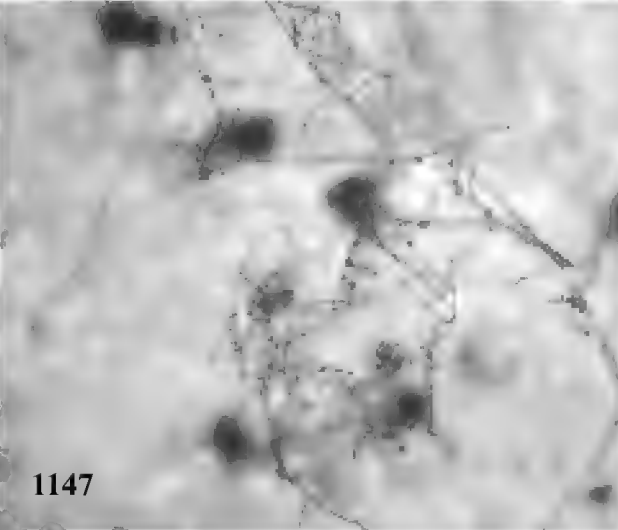
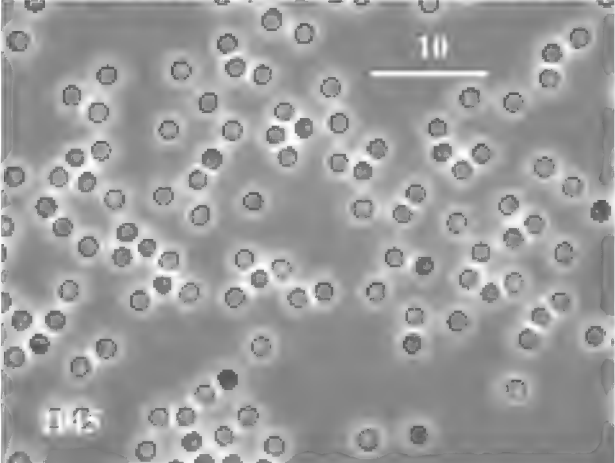
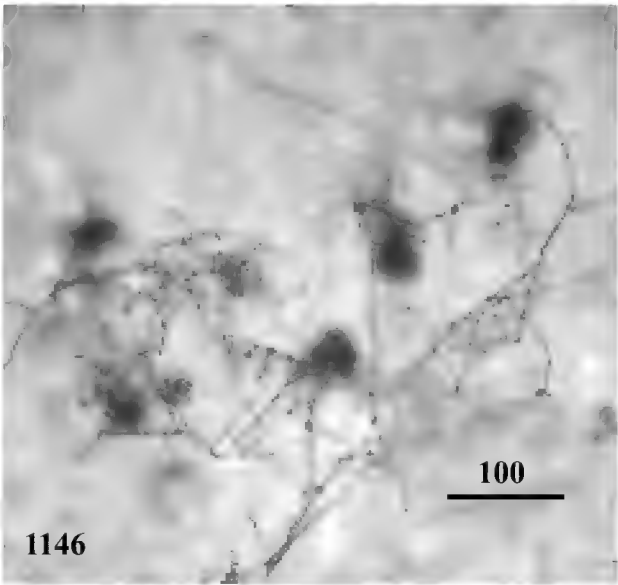
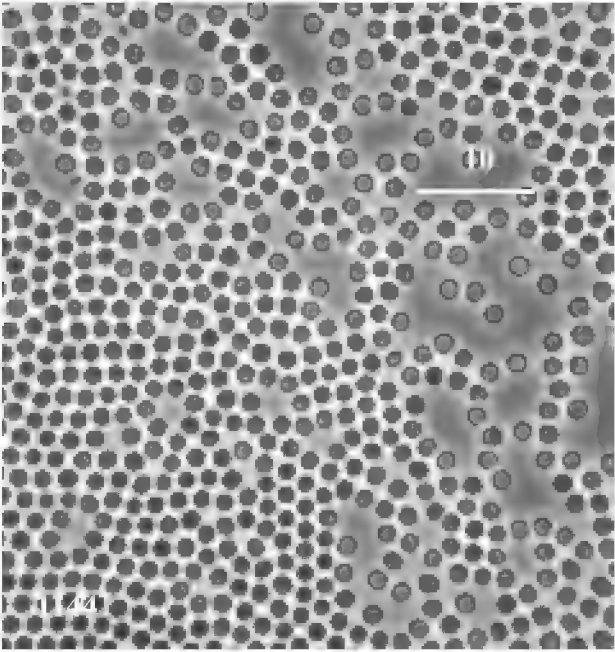
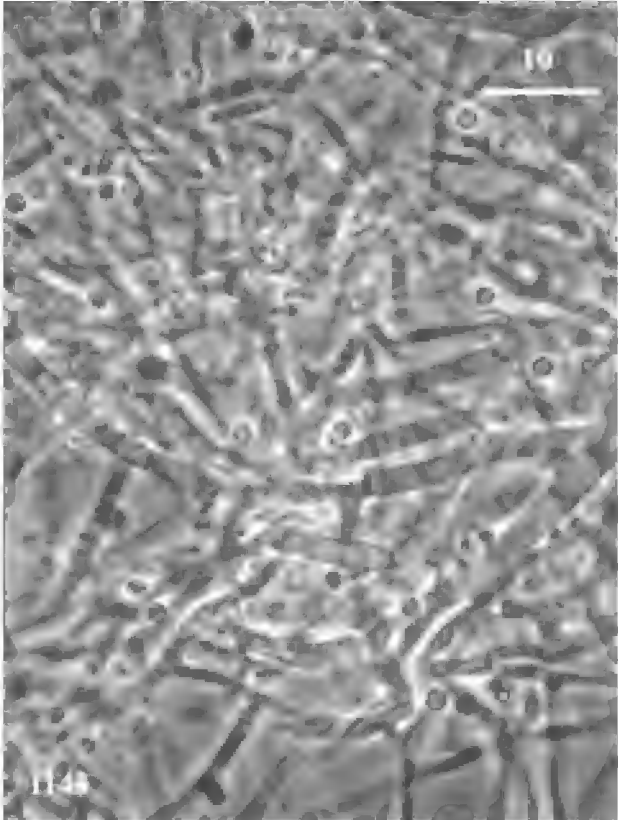
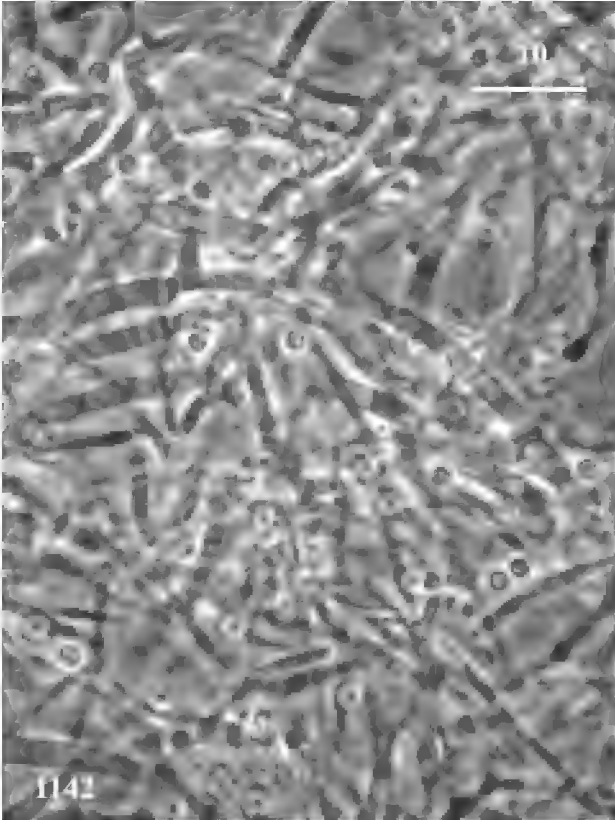
1146, 1147 = Hyphomycetous form, on b/c-medium.

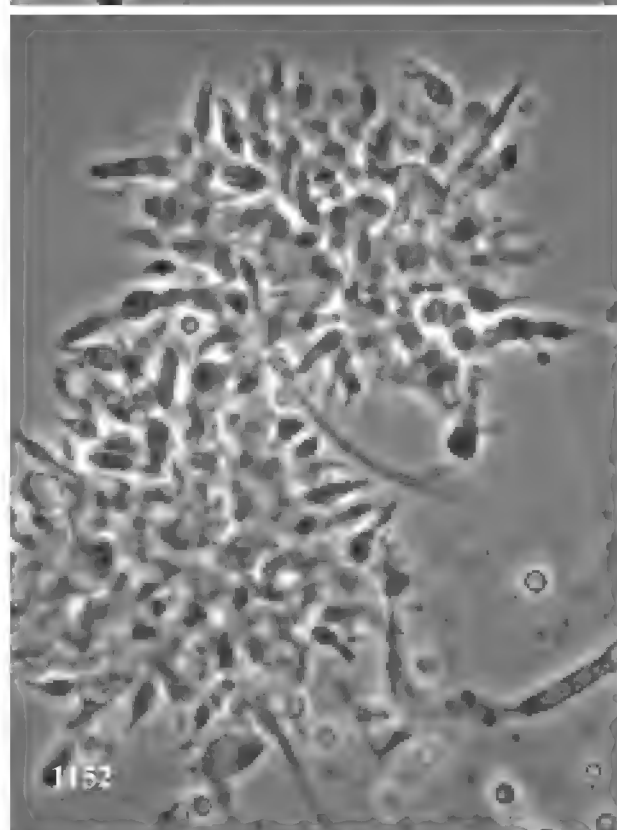
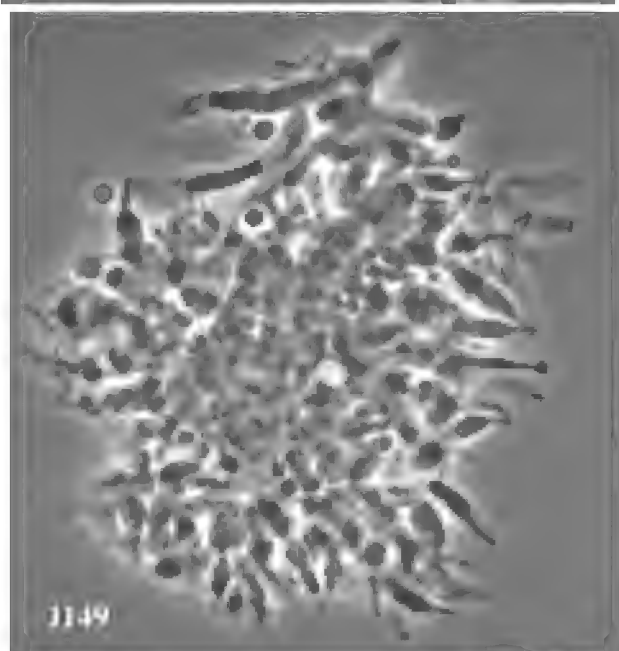
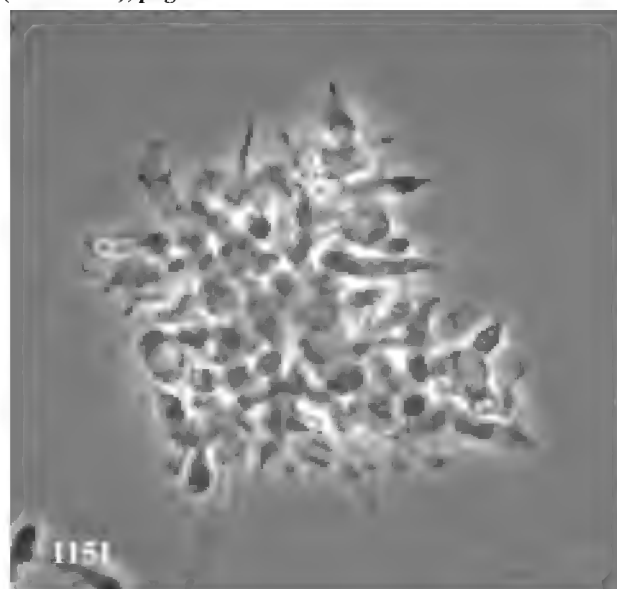
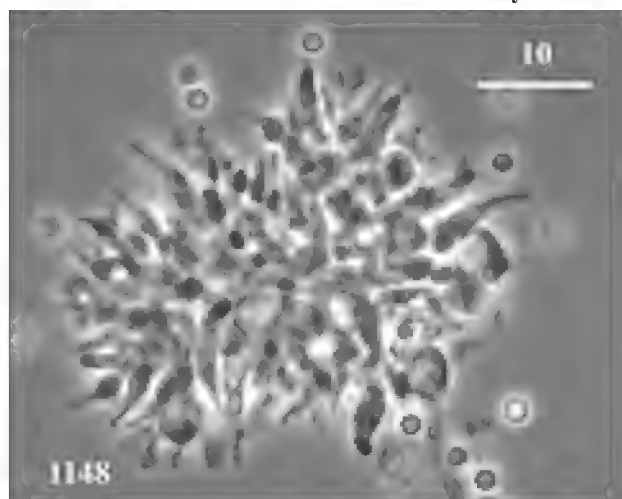
page 63

1148, 1149, 1150, 1151, 1152 = Clusters of phialides, from 10 days cultures. ( squashed mounts, by phase contrast )









**1354 *Pycnidiella resinae*** ( Ehrenb. ex Fr.) von Hoehnel (1915), Sber. Akad. Wiss. Wien **124**: 91.

== *Cytospora resinae* Ehrenb. (1818), Sylv. Berol.: 15.

== *Sphaeria resinae* Ehrenb. ex Fr. (1823), Syst. Myc. **2**: 453.

== *Tubercularia resinae* ( Ehrenb. ex Fr.) Thu:m. (1871), Fungi Austriaci no. 79.

== *Zythia resinae* ( Ehrenb. ex Fr.) Karst.(1887), Medd. Soc. Fauna flora fenn. **14**: 104.

Teleomorphosis: *Tromera resinae* ( Fr.) Korb. (1865), Pareg. lich.: 453.

**Descr** Coloniae in b/c-medio diffusae, fere sine hyphis aeriis. Conidiomata superficialia, dissita ad gregaria, globosa, alba, aspectu gelatinosa, 100-200  $\mu$  in diam., minute inconspicue papillata ostiolata; parietes sub lente albi, 25-35  $\mu$  crassi, externe hyphis intricatis non-characteristicis, interne e cellulis angularibus hyalinis 2.5-5  $\mu$  diam. constantes. Conidiophora ex intimis cellulis parietis oriunda, circum cavitatem conidiomatis praeter peripherium ostioli obtegentia, cylindrica, usque ad 23  $\mu$  alta, 1-4-plo ramifera; metulae 2.5-5  $\mu$  longae 2-3  $\mu$  latae; cellulae conidiogenae in 1-5 fasciculo ad apices metularum dispositae, naviculares ad cylindricae, 4-10 x 2-3  $\mu$ , apicibus ad ca. 1  $\mu$  angustatae, ad ores enteroblasticae-phialidicae, parietibus periclinalibus spissiscentibus, nonnunquam percurrenter proliferatae, itaque parietibus collorum intermittenter crassitunicatis ( i. e. combinatio enteroblasticae-phialidicae et enteroblasticae-annellidicae ), postremo collis 1  $\mu$  latis et usque ad 10  $\mu$  attingentibus. Conidia globosa, 2.0-3.0  $\mu$  in diam., laevia, hyalina, alba in massa.

Coloniae in CMA tarde crescentes, albae, aspectu coriaceae, hyphis aeriis pauperis, conidiomatibus ad et circum inoculas, margine definitae. Hyphae vegetativae ramosae septatae, 1-4.2  $\mu$  latae, laeves, hyalinae, albae in massa. Synanamorphosis non invenitur. Teleomorphosis non invenitur.

**Hab** MFC-21083. E solo sylvae ( arbores dicotyledonum ); Shimizu-cho, Wakayama Pref., Japan; March 2000.

**Mem** *Pycnidiella* Hoehnel (1915), Sber. Akad. Wiss. Wien **124**: 91. T. sp.: *Pycnidiella resinae* ( Ehrenb. ex Fr. ) Hoehnel, *loc. cit. supra*.

**Ref** B. C. Sutton (1980), The Coelomycetes, p. 544-545. // D. L. Hawksworth & M. Sherwood (1981), Canad. J. Bot. **59**: 357.

#### Photo

page 65

1153 = Habit, conidiomata formed on b/c-medium. One month old.

1154 = Habit, conidiomata formed on CMA. One month old.

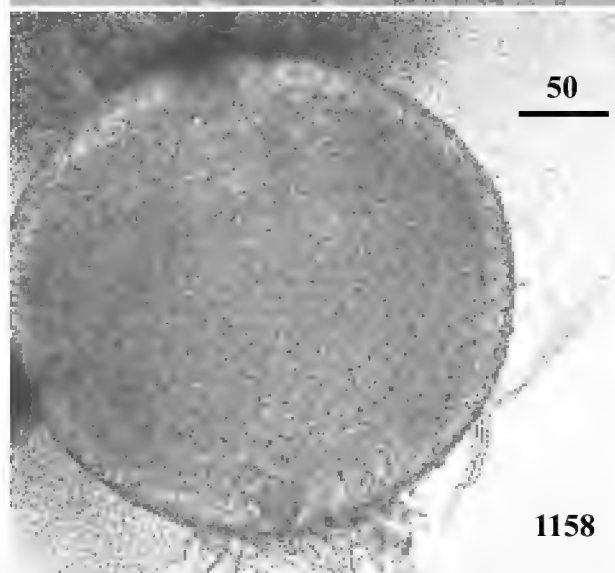
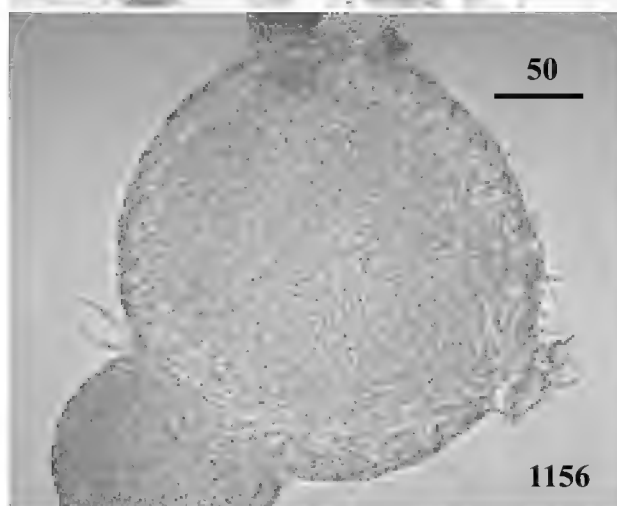
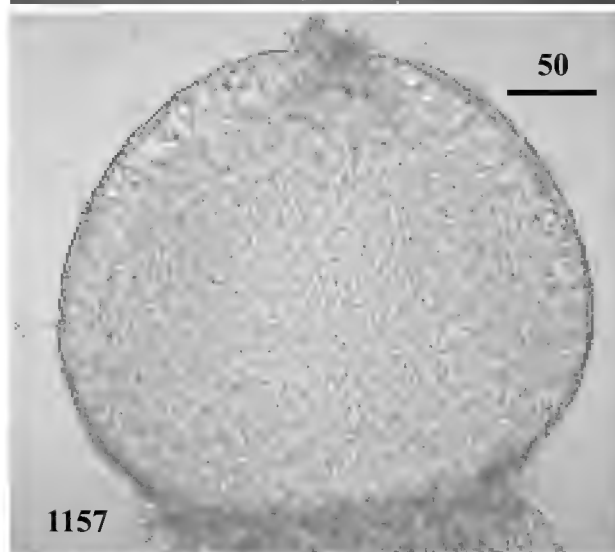
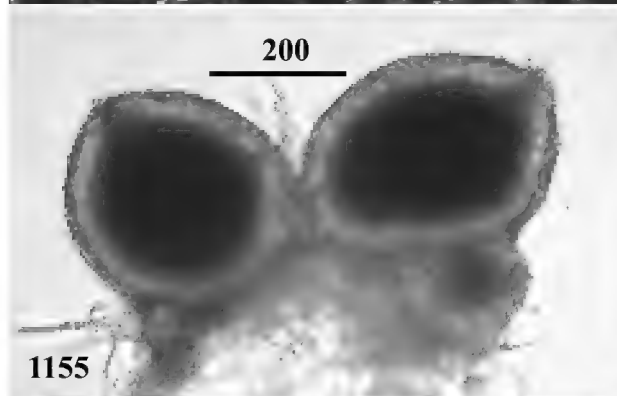
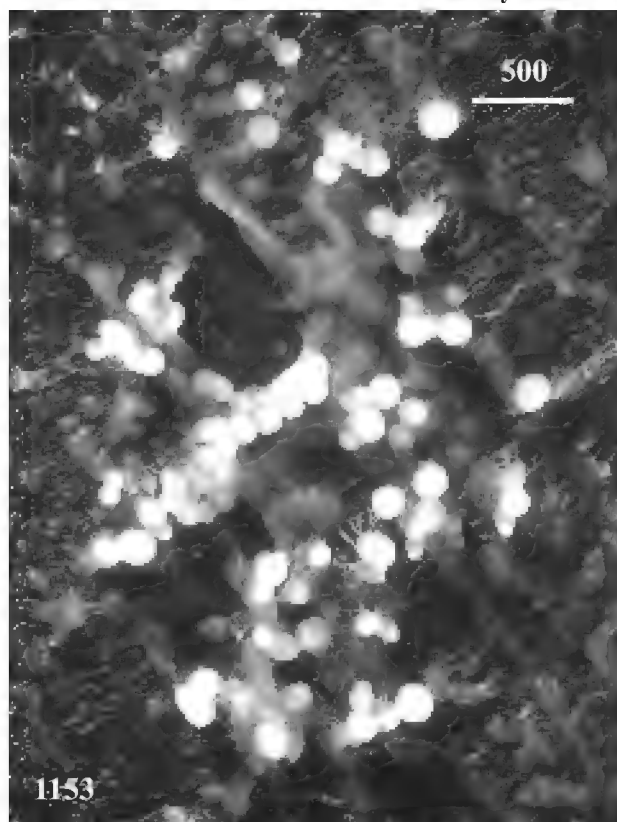
1155, 1156, 1157, 1158 = Pycnidia from b/c-medium.

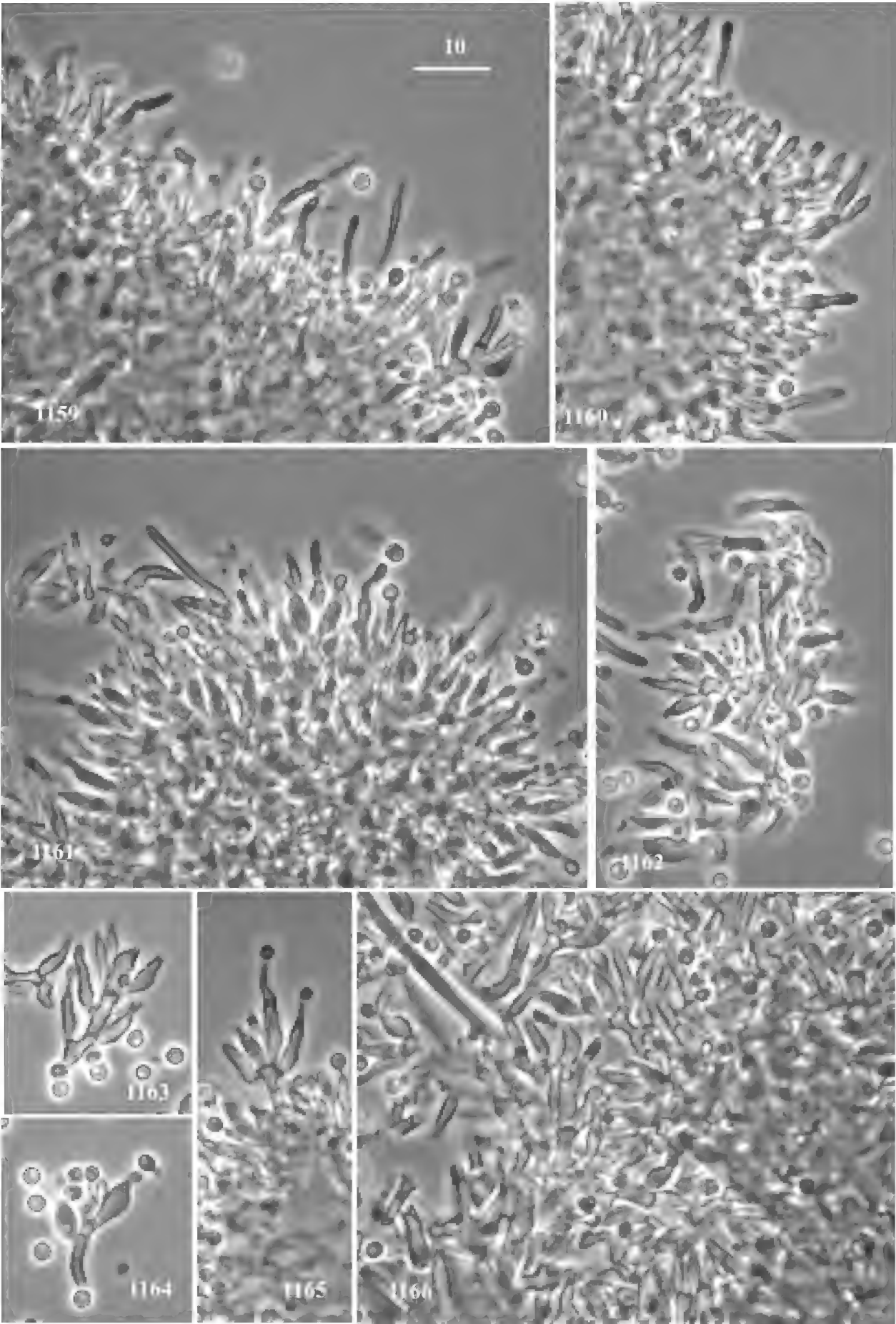
page 66

1159, 1160, 1161, 1162, 1163, 1164, 1165, 1166 = Conidiophores and conidiogenous cells, from squashed pycnidia. ( by phase contrast )

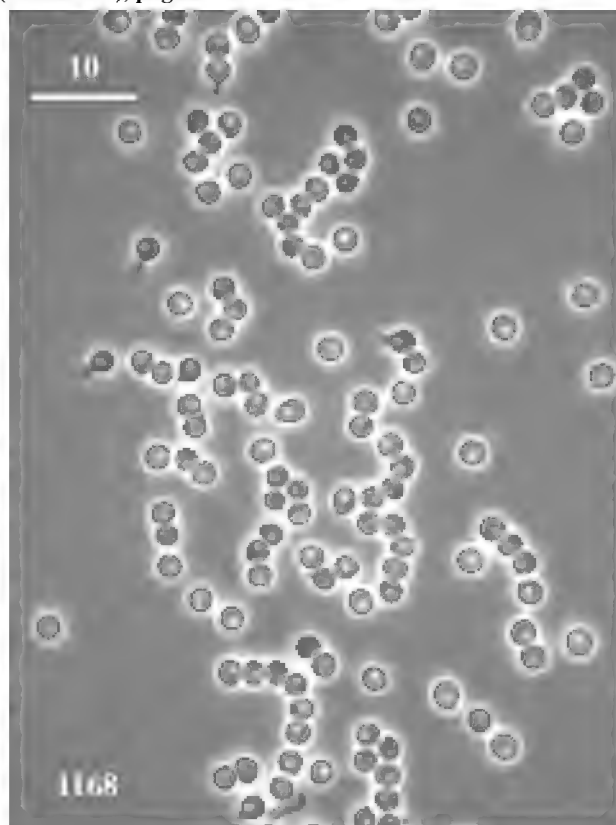
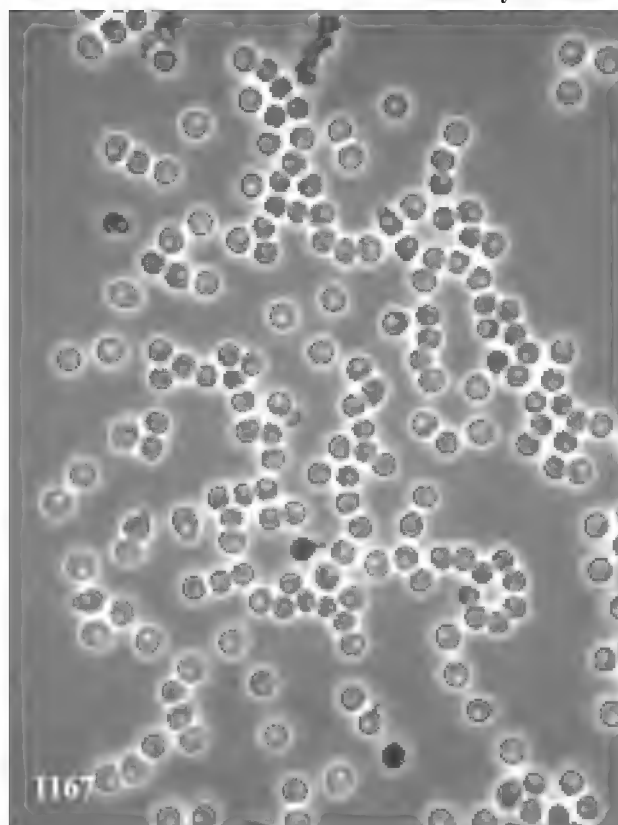
page 67

1167, 1168 = Conidia. ( by phase contrast )









**1355 *Ascochyta irregularispora* anam. sp. nov.**

**Descr** Coloniae in CMA diffusae, area centrali laxe floccosae griseo-albae ad pallide griseae, margine lato sumberso incolorato; reversione parte centrali griseae margine lato incolorato. Hyphae vegetativae ramosae septatae 0.8-5  $\mu$  latae, laeves, hyalinae ad subhyalinae, griseo-albae ad pallide griseae in massa. Pycnidia dissita ad gregaria, fere superficialia, interdum semi-immersa, aspectu salmonea ob massas conidiorum, globosa, 75-185  $\mu$  in diam., maturitate cum 1-3 oribus non-papillatis 18-38  $\mu$  in diam; parietes tenues, membranacei, crassitudine tribus vel quatuor cellulis crassi, externe vis. textura angulari, e cellulis isodiametricis vel elongatis 4-12  $\mu$  diam., sectio complanatis constantes, maturitate sed juventute subhyalini ad pallide brunnei, vetustate postremo modice brunnei. Conidiophora deficientia. Cellulae conidiogenae ex intimis cellulis parietis oriundae, plusminusve similes intimas cellulas parietis, ampulliformes, 4.5-9  $\mu$  latae, 7.5-10  $\mu$  altae, apice 1.5-2.5  $\mu$  diam., enteroblasticae-phialidicae, parietibus periclinalibus inconspicue spissescenscentibus. Macroconidia cylindrica, apice rotundata basi leviter angustata, generatim leviter flexa, magnitudine variabilia, 1-3 euseptata, predominantan 3-septata, in isdem 1-septatis 9-16 x 2.5-4  $\mu$ , in isdem 3-septatis 16-30 x 2.5-4  $\mu$ , laevia, hyalina, ex ostiolo in massa salmonea mucosa exorientia. Microconidia in numero perpaupera, oblonga, unicellularia, 2.5-5 x 1.5-2  $\mu$ , laevia, hyalina. Chlamydosporae nullae. Teleomorphosis non vidi. Coloniae in b/c-medio similes isdem in CMA, quoad numero pycnidiis pauperis. **Etym.:** *irregularispora* <="conidia irregular" in size and septation.

**Hab** E solo sylvae ( arbores dicotyledonum ); Kobe Municipal Arboretum, Kobe, Japan; Sept. 1990.

**Typus:** cultura CMA exsiccata, MFC-21090.

**Mem** Fide Sutton (1980), in *Stagonospora* conidiogenous cells are blastic-annellidic and conidia with several transverse eusepta, and in *Ascochyta* conidiogenous cells are enteroblastic-phialidic and conidia 1-septate. // The present species has some similarity to *Stagonospora samarorum* ( Desm.) Boerema in conidial morphology [ ref: G. H. Boerema & M. J. Dorenbosch (1973), Studies in Mycology 3 ].

**Ref** E. Punithalingam (1979), Mycol. Pap. **142**. // B. C. Sutton (1980), The Coelomycetes. C.M.I., Kew.

**Photo**

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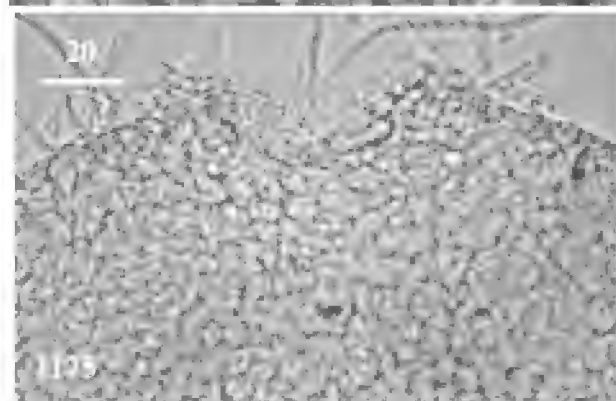
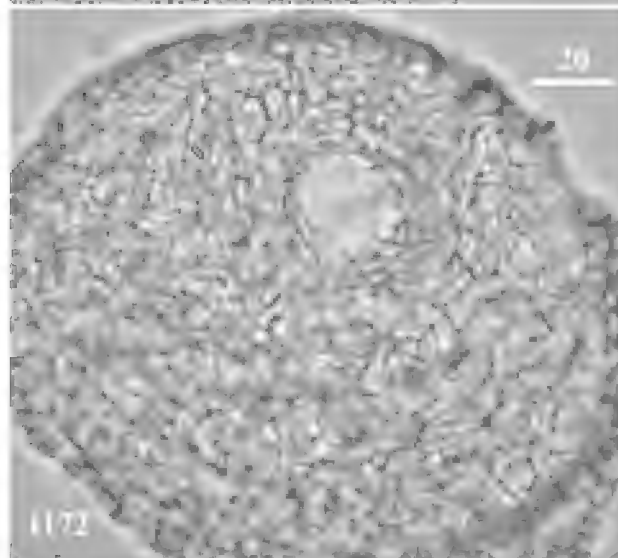
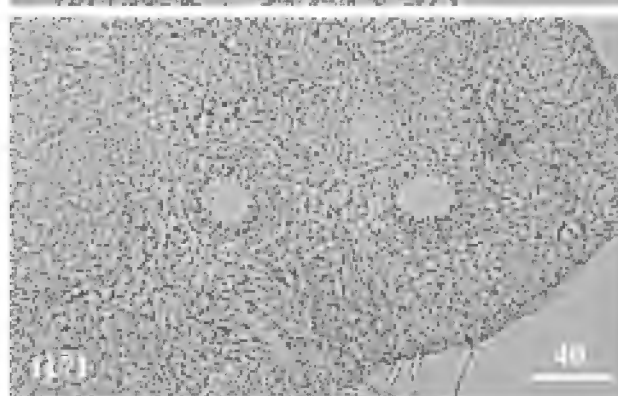
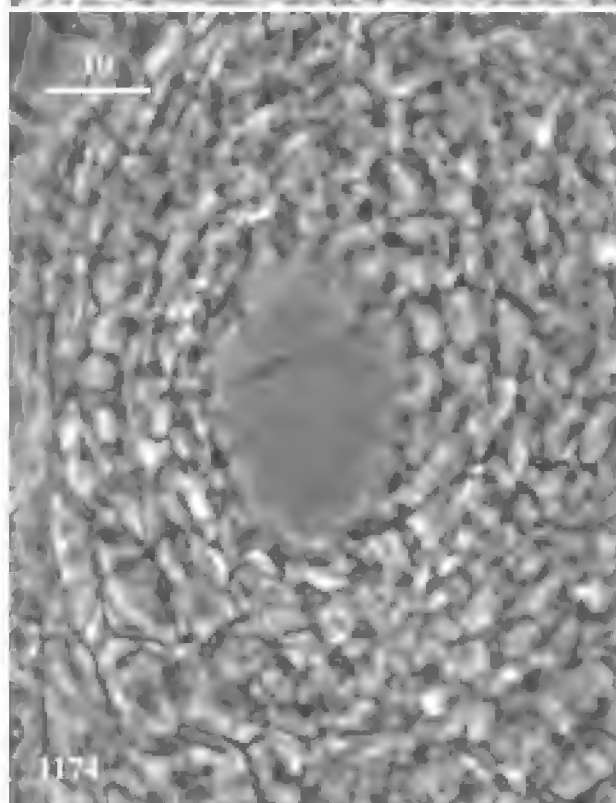
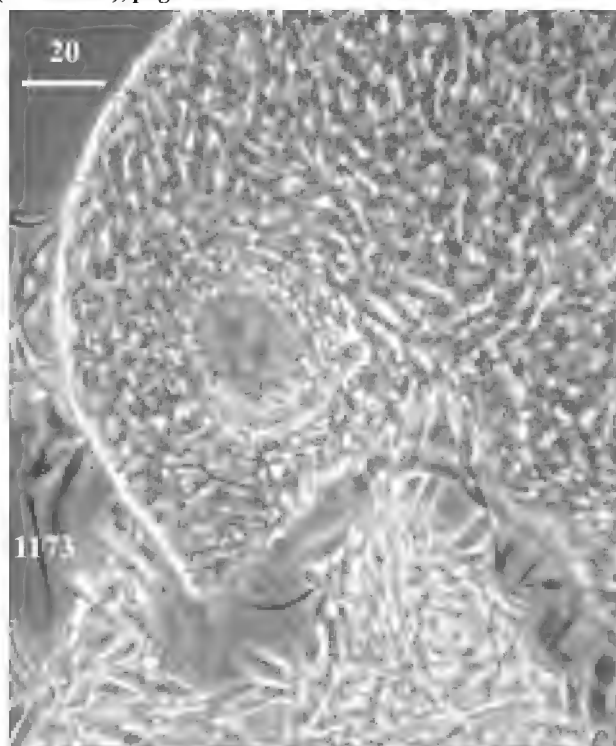
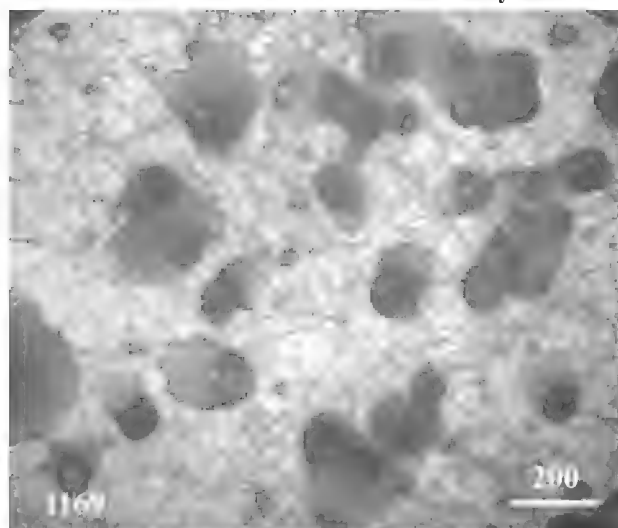
1169 = Habit. Pycnidia on CMA, 10 days.

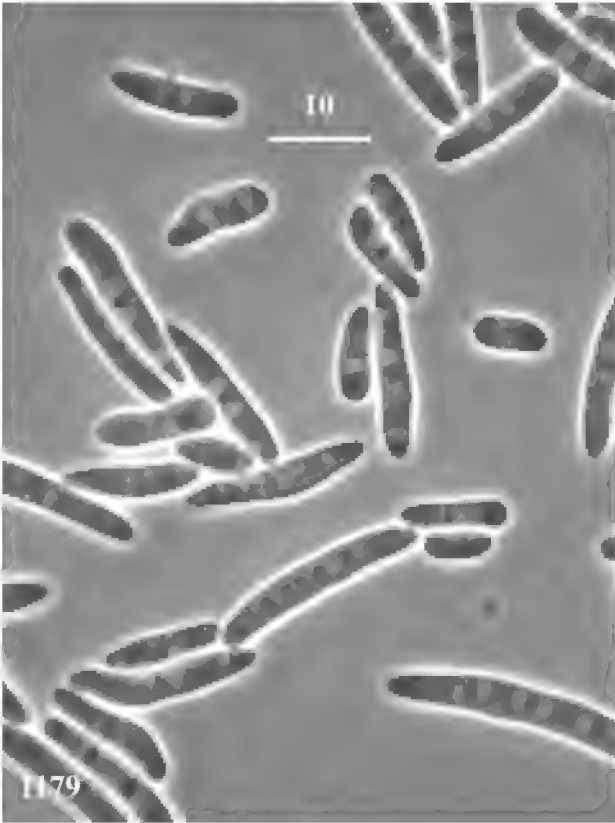
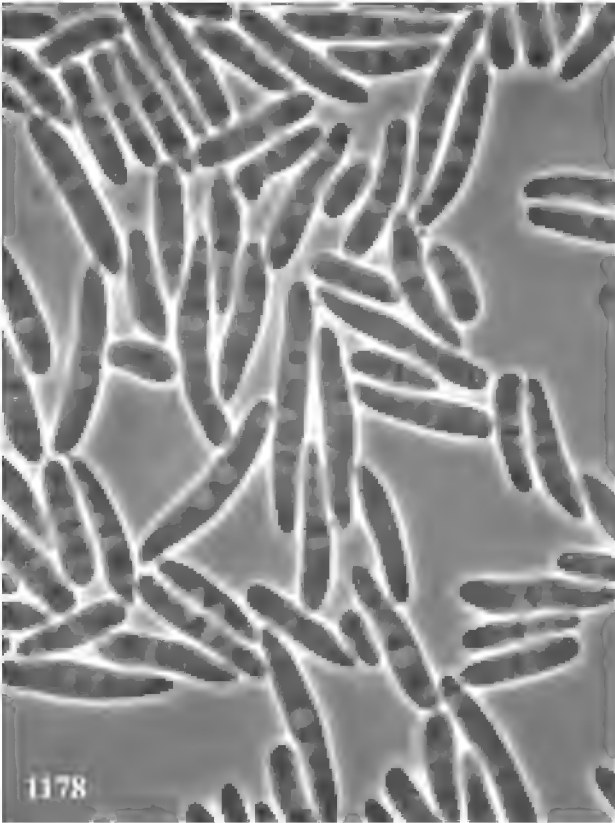
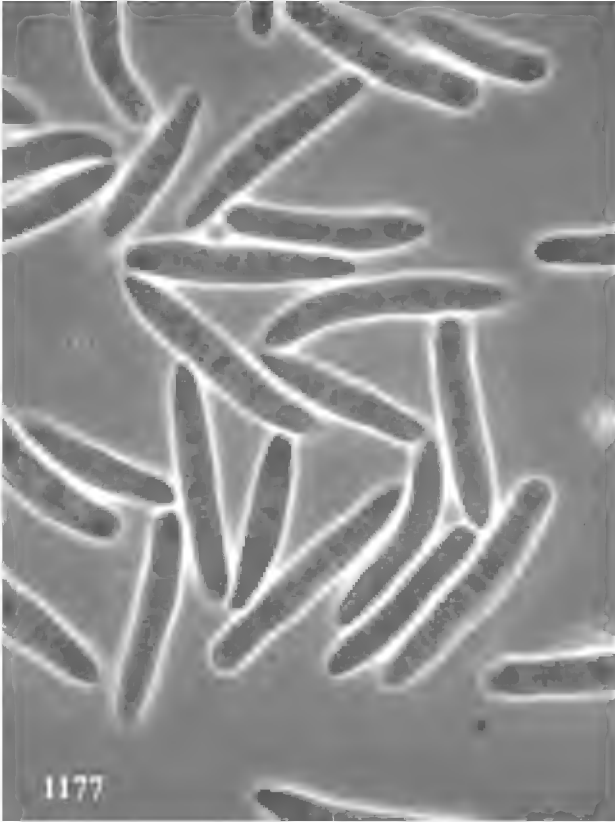
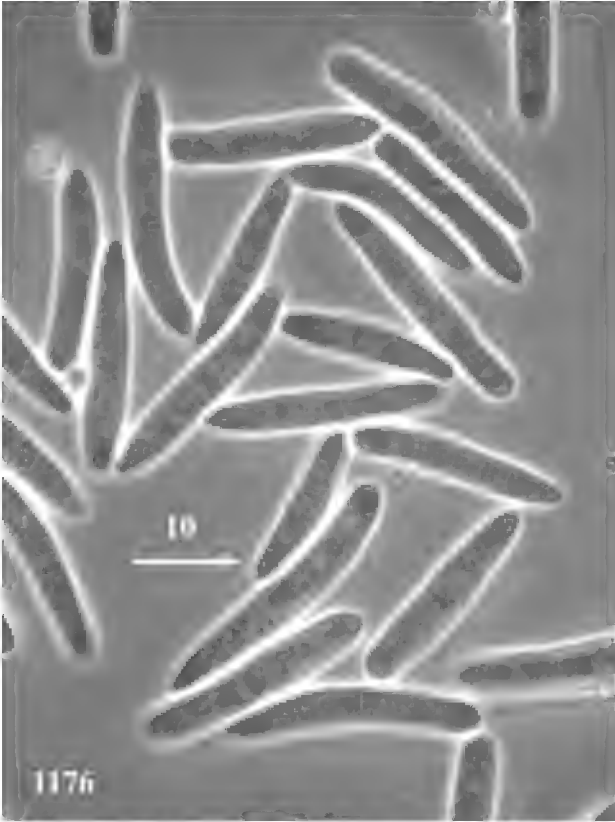
1170, 1171, 1172, 1173, 1174 = Pycnidia, in apical view. ( 1173, 1174 by phase contrast )

1175 = Pycnidia, in lateral view.

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1176, 1177, 1178, 1179 = Macro-conidia and micro-conidia. ( by phase contrast )





**1356 *Microsphaeropsis paliformis* anam. sp. nov.**

**Descr** Coloniae in CMA modice effusae, hyphis aeriis nullis, agaro brunneo, parte centrali pycnidiis ateris abundantibus, margine diffusae. Hyphae vegetativae immersae, radiatim crescentes, ramosae, septatae, non vel constrictae ad septa, 1.5-7  $\mu$  latae, hyalinae ad modice brunneae, laeves ad verruculosae. Pycnidia superficialia ad immersa, plusminusve in lineis radiatis solitarie vel gregarie disposita, globosa, 85-190  $\mu$  diam., apice collo ostiolato; parietes corporis tenues, crassitudine 2-3 cellulis crassi, strato exteriori una cellula crasso modice fusco, e cellulis angulatis complanatis 3.5-6  $\mu$  diam. modice fuscis compositi, strato interiore cellulis similibus subhyalinis: colla sunt valla circularia, una cellula crassa, ab apice vis. 12.5-20  $\mu$  in diam., e latere vis. cylindrica, 8-14  $\mu$  alta, e cellulis longis 2.5-6  $\mu$  latis, modice fuscis composita. Conidiophora desunt. Cellulae conidiogenae sunt intimae cellulae parietis, ex internis cellulis parietis fere non distinguibiles, circum cavitatem pycnidii dispositae, plusminusve conicae ad lageniformes, 4-5  $\mu$  altae, basi 2.5-4  $\mu$  latae, sursum angustatae, apice 1.2-1.5  $\mu$  diam., pallide brunneae ad subhyalinae, ad orem enteroblasticae-phialidicae parietibus periclinalibus spissescens. Conidia oblonga, 3-4 x 1.6-2.2  $\mu$ , basi non cicatricosa, laevia, pallide brunnea, atrobrunnea mucosa in massa. Chlamydosporae deficientes. Synanamorphosem non vidi. Teleomorphosem non invenitur. **Etym.:** *paliformis* <= pycnidia with "palisade-like" neck.

**Hab** Ramunculo carioso indet. arboris dicotyledonis in fundo sylvae densae; Murat, Skrang River basin, Sarawak, Malaysia; Nov. 11, 1999. **Typus:** cultura CMA exsiccata, MFC-21040.

**Ref** B. C. Sutton (1980), The Coelomycetes, p. 422-427. => Nine species of *Microsphaeropsis* treated.

**Photo**

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1180 = Habit. Pycnidia on CMA, 3 weeks old at 25 C.

1181, 1182, 1183, 1184, 1185, 1186 = Pycnidia from CMA, gently squashed.

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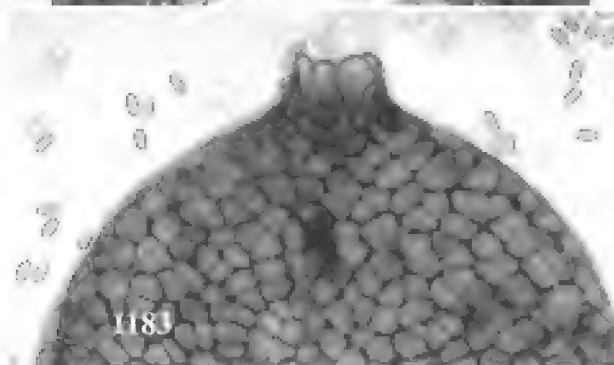
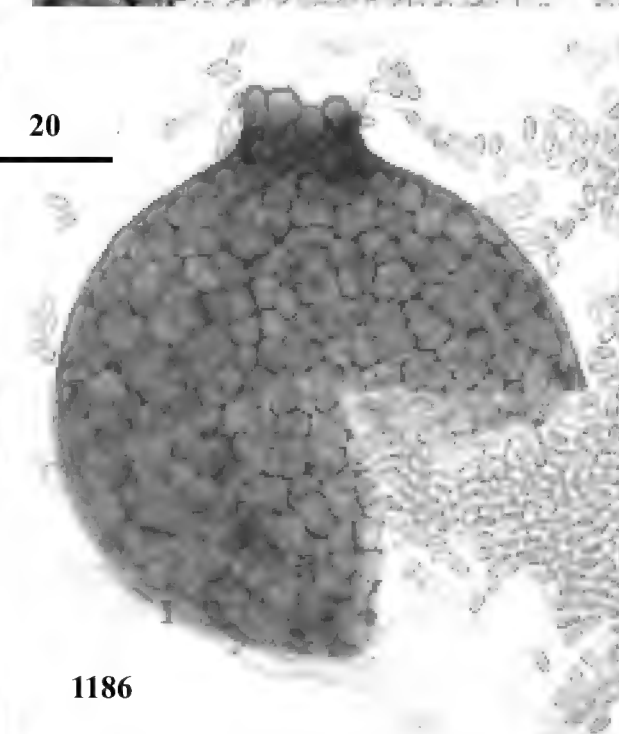
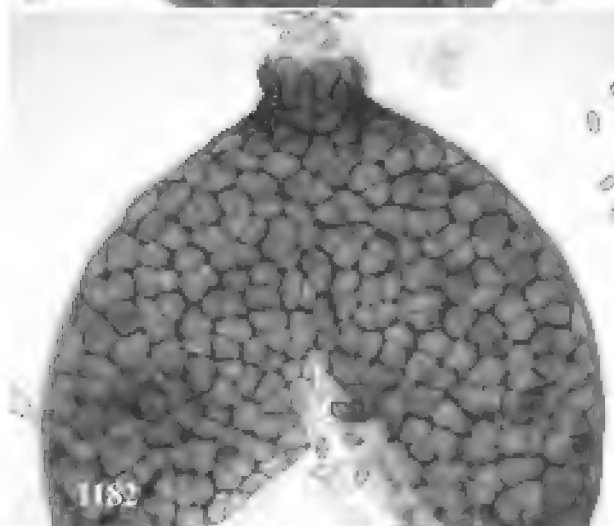
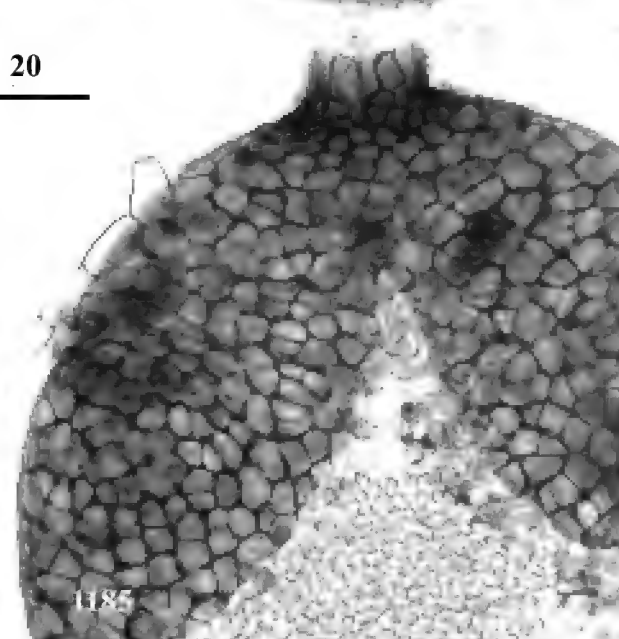
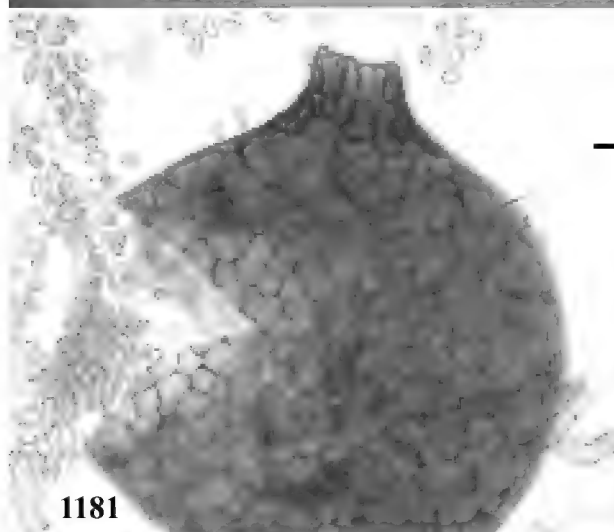
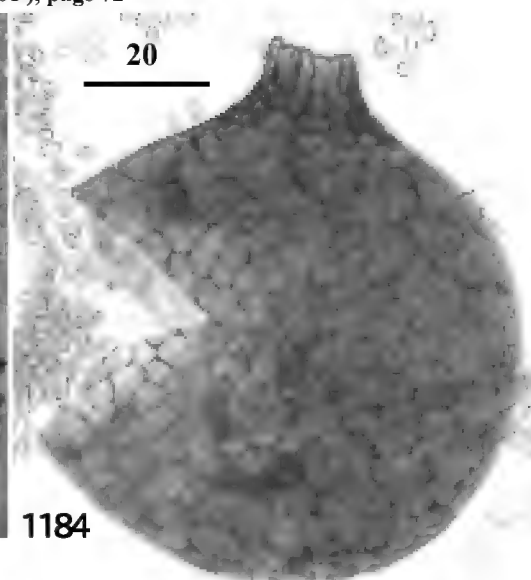
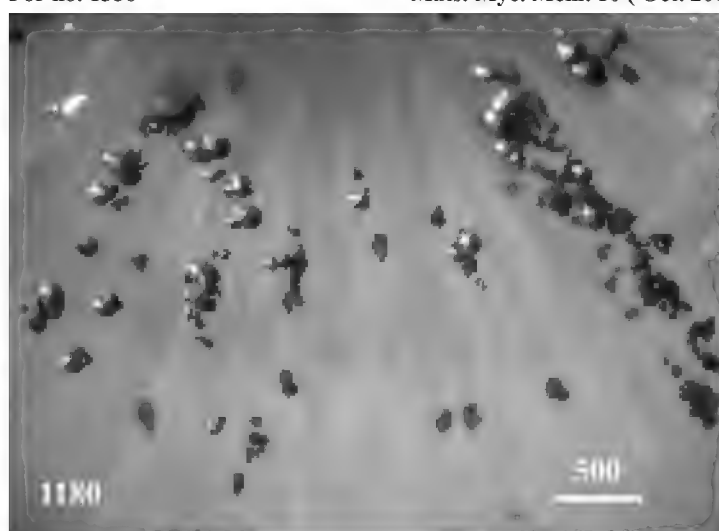
1187 = Parts of peridium, in surface view.

1188, 1189 = Conidia. ( 1189 by phase contrast )

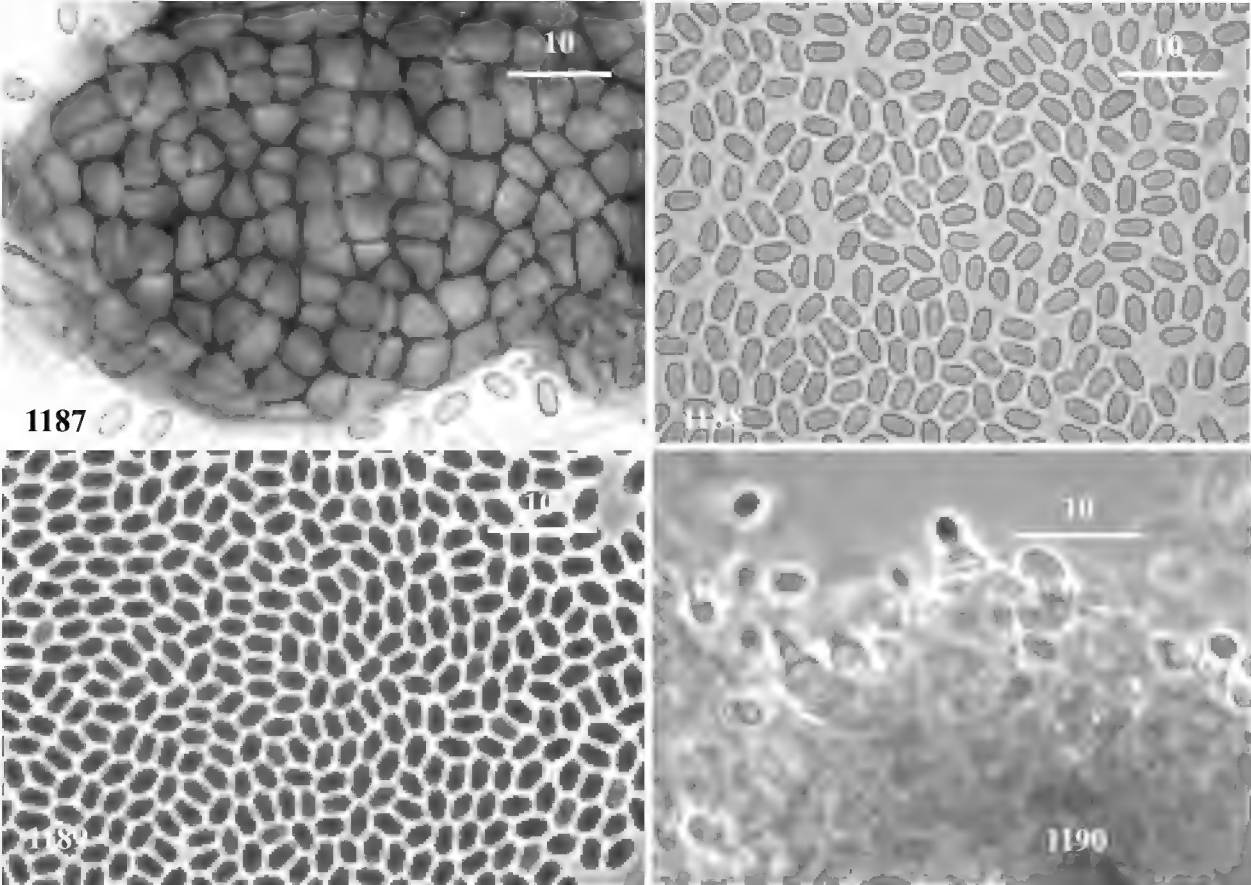
1190 = Phialides. ( by phase contrast )

page 206 ( color plate )

1784 = Habit. Pycnidia on CMA, 3 weeks old at 25 C.







**1357 *Microsphaeropsis atrocyliandrocollifera* anam. sp. nov.**

**Descr** Coloniae in b/c-medio diffusae, hyphis aeriis sparsis, pycnidiis fuscis abundantibus dissitis ad gregariis. Pycnidia superficialia, globosa, fusca, nuda vel interdum laxas telas hypharum hyalium gerentia, 1-3 collis atro-fuscis cylindricis: corpora globosa, 75-225  $\mu$  in diam.; parietes membranacei, pallide brunnei, crassitudine duabus cellulis crassi, e cellulis angulatis complanatis pallide brunneis 3-10  $\mu$  diam. compositi: colla cylindrica recta vel interdum flexa, 12.5-75  $\mu$  alta 17.5-30  $\mu$  lata, canale centrali 4.5-5.5  $\mu$  diam, e cellulis angulatis isodiametricis 3-5  $\mu$  in diam. vel longitudinaliter elongatis modice brunneis composita, extime partim secus septia carbonacea, itaque ut videtur atro-brunnea. Conidiophora cellulas conidiogenas reducta. Cellulae conidiogenae sunt intimae cellulae parietis, more *Phomatis*, subhyalinae, aspectu apicali angulares 4-8  $\mu$  diam., aspectu laterali ampulliformes, apice ad 1-1.5  $\mu$  angustatae, enteroblasticae phialidicae, pariete periclinali spissescenti. Conidia cylindrica, utrinque rotundata, unicellularia, laevia, (4-)4.5-5.5(-6) x 1.0-1.2  $\mu$ , hyalina, in massam mucosam lactaneam ad brunneo-albam exorientia.

Coloniae in CMA modice crescentes, pallide brunneae, hyphis aeriis sparsis, in area centrali pycnidiis abundantibus, margine lato incolorato submerso diffuso. Hyphae vegetativae ramosae septatae 1-5  $\mu$  latae laeves hyalinae ad pallide brunneae. Pycnidia superficialia ad semi-immersa, dense dissita ad gregaria, nuda. Chlamydosporae et sclerotia desunt.

Teleomorphosis non invenitur. **Etym.**: *atro-cylindro-collifera* <= the pycnidia "bearing black cylindrical neck".

**Hab** E solo sylvae ( arbores dicotyledonis ); Kobe Municipal Arboretum, Kobe, Japan; Sept. 1990.

**Typus**: cultura b/c-medio exsiccata, MFC-21087.

**Ref** G. Morgan-Jones (1974), *Icones Generum Coelomycetum* 7: 1-42, p. 21-22. // B. C. Sutton (1980), *The Coelomycetes*, p. 422-423. // G. Morgan-Jones (1974), *Canad. J. Bot.* 52: 2575-2579 & 1 pl. // G. Morgan-Jones & J. F. White (1987). *Mycotaxon* 30: 177-187.

**Photo**

page 75

1191, 1192 = Habit. Pycnidia on b/c-medium, 10 days old.

1193 = Habit. Pycnidia on CMA, 10 days old.

1194 = Pycnidium, gently squashed, showing two dark necks, in apical view, most conidia washed away.

1195, 1196 = Pycnidia, gently squashed, showing dark necks, in lateral view.

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1197 = Inner layer of pycnidial peridium, in top view of inside, showing circular mouths of conidiogenous cells.

1198 = Squashed mount of pycnidial neck, showing textura angularis structure, cells partly carbonized along septa.

1199, 1200 = Conidia. ( by phase contrast )

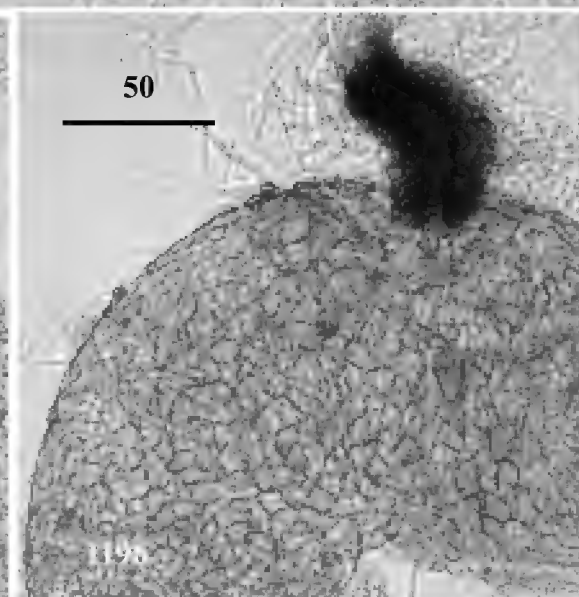
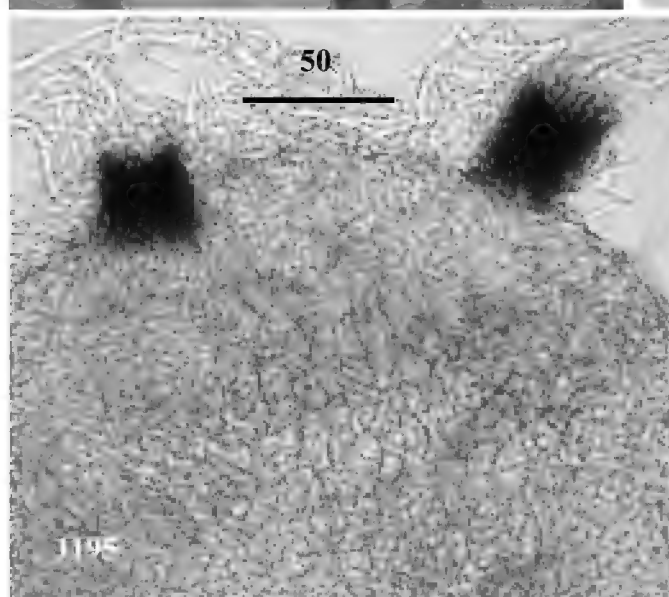
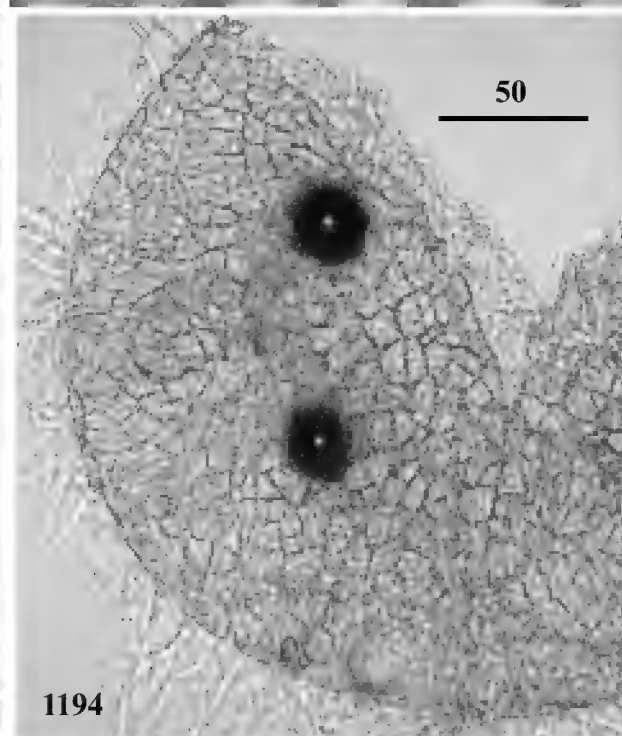
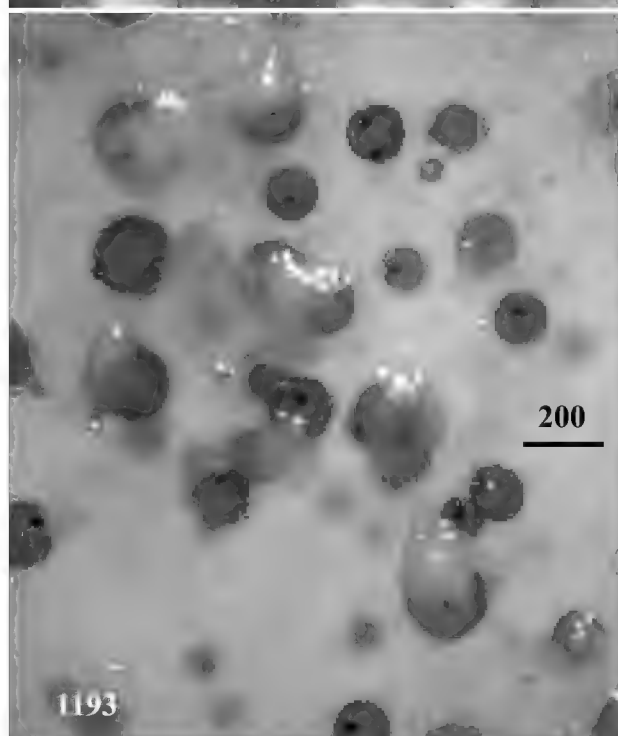
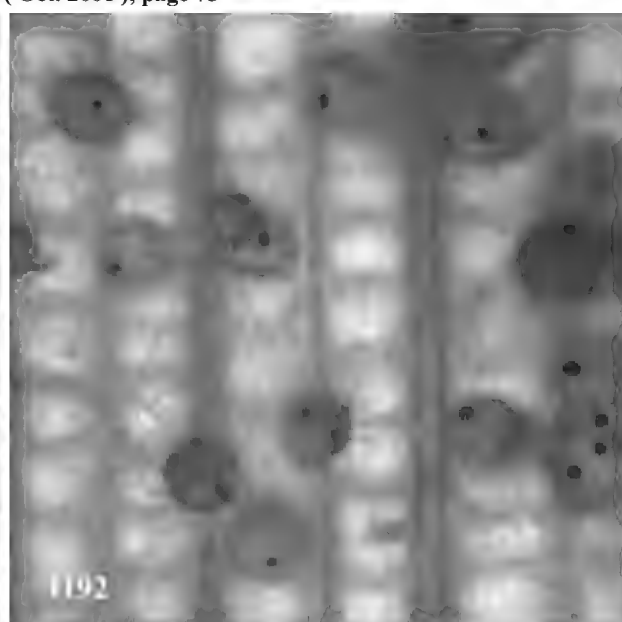
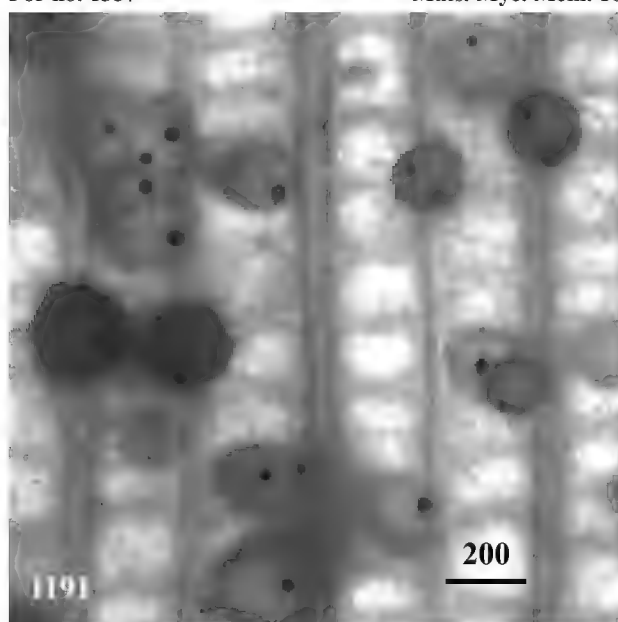
page 206 ( color plate )

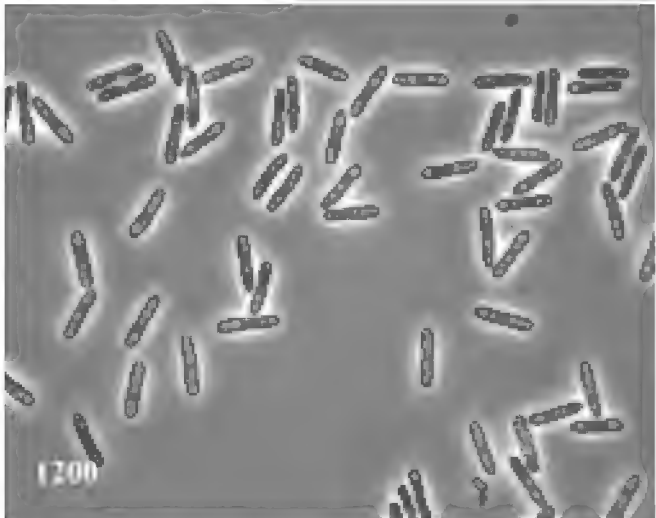
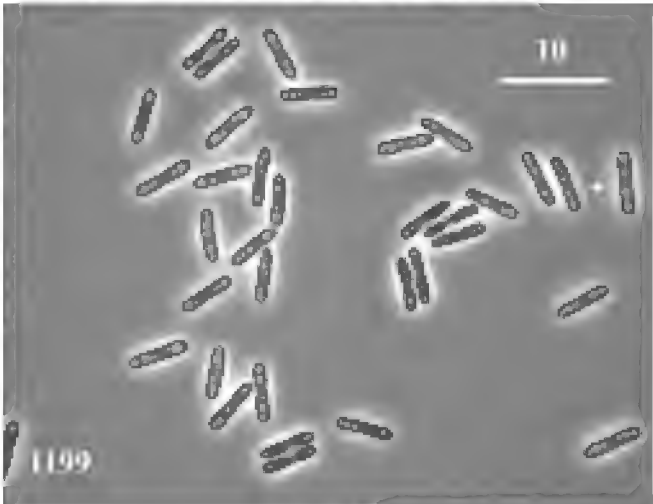
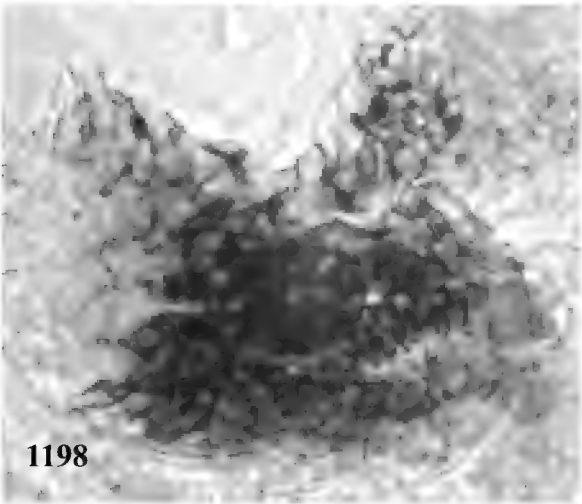
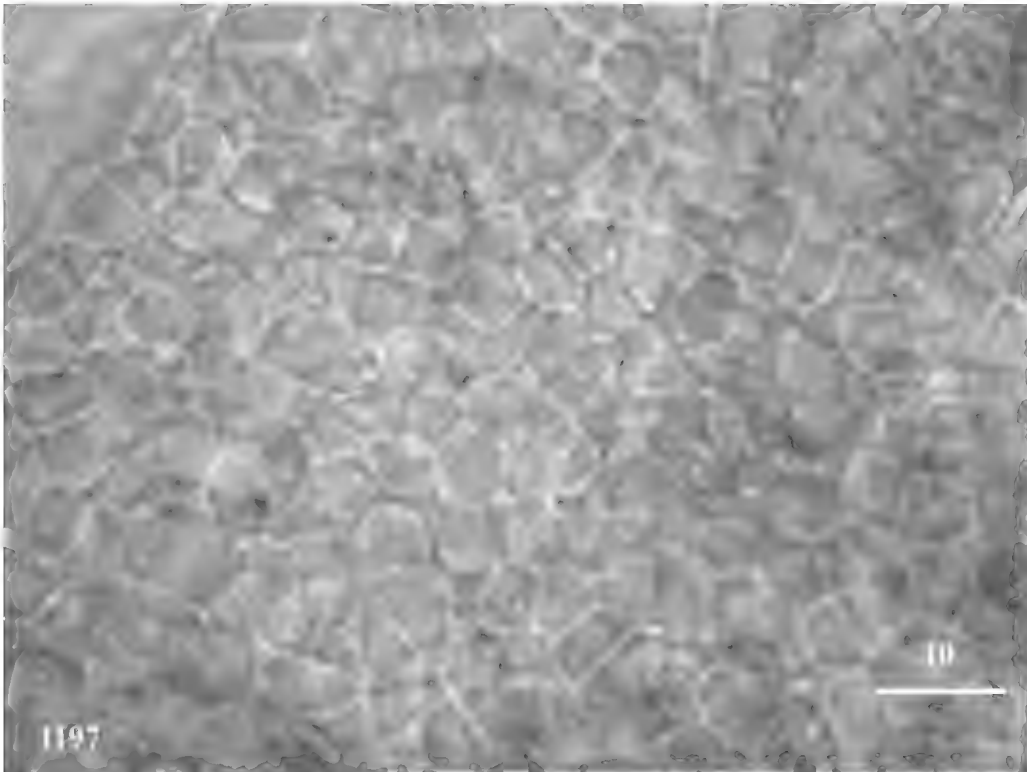
1785 = Habit. Pycnidia on b/c-medium, 10 days old.

page 207 ( color plate )

1786 = Habit. Pycnidia on b/c-medium, 10 days old.

1787 = Habit. Pycnidia on CMA, 10 days old.





**1358 *Chaetosticta cylindrocollifera* anam. sp. nov.**

**Descr** Coloniae in b/c-medio diffusae, hyphis aeriis sparsis, aspectu punctis atro-brunneis (= pycnidiis) dense dispersis. Pycnidia in 5-6 diebus plene maturescentia, dissita ad gregaria, atro-brunnea, e corpore globoso et collo cylindrico composita: corpora globosa vel aliquando ovoidea, 100-225 µm in diam., unilocularia, superficialia ad interdum immersa; paries obtectus laxe reticulatis hyphis, quod hyalinis ad brunneis; intus constantus e cellulis angularibus 4-8 µm diam., pallide brunneis introsum hyalinis: colla singularia vel raro duo, cylindrica apice ostiolata longitudine variabilia 20-200 µm longa 30-60 µm lata modice brunnea ad atro-brunnea, quam corpora fusciora, a superficie vis. textura angulari. Setae pycnidiales omnino partem aeriam dense obtegentes, 50-210 µm longae, basi ad 6-12 µm inflatae, supra basim 4.5-6 µm latae, sursum attenuatae, prope apicem 2-3 µm latae, rectae vel leviter curvae, septatae, crassitunicatae, lumine deminuto, brunneae ad atro-brunneae, prope apicem pallidiores, apice obtusae. Conidiophora deficientia. Cellulae conidiogenae sunt intimae cellulae parietis pycnidii, circum cavitatem pycnidii sitae, ab interioribus cellulis pariete pycnidii difficile distinguendae, in forma irregulares, angulares subglobosae obovatae lageniformesve, 4-6 µm longae 2-5 µm latae, ad apices canalibus centralibus minutis cum collarulis minutis cylindricis 1-3 µm longis 1-1.5 µm latis, parietibus periclinalibus manifeste spissiscentibus. Conidia oblonga, unicellularia, (4-)4.5-5.5(-6) x 1.3-1.7 µm, ratione long. : lat. = 2.25 - 3.85 : 1, uniguttulata in extrema ambo, laevia, hyalina, siccitate cirrhos longos pallide luteos et humiditate massas mucosas pallide luteoras lecta.

Coloniae in CMA tenuiter diffusae, fere incoloratae, sine hyphis aeriis. Pycnidia superficialia vel immersa, frequenter irregulariter aggregata, in forma et magnitudine variabilimae quam eadem in b/c-medio, nonnumquam 2-3 collis ostiolatis. **Etym.:** *cylindrocollifera* <= the pycnidia "bearing cylindrical neck".

**Hab** Morti cortice ramuli indet. arboris dicotyledonis; Zanha-misaki, Yomitanson, Okinawa Pref., Japan; Feb. 2000. **Typus:** cultura b/c-medio exsiccata, MFC-21070.

**Mem** The new species is similar to *Chaetosticta perforata* (Ell. & Everh.) Petr. & Syd., in which pycnidia are globose with a papillate ostiole and conidia are non to several septate, 4.7-6.2 x 1.2-1.8 µm in 0-septated ones, in total range 4.7-30.8 x 1.2-4.3 µm.

**Ref** F. Petrak & H. Sydow (1925), Ann. Mycol. **23**: 209-294. => *Chaetosticta* Petrak & H. Sydow (1925), loc. cit. p. 270. / = *Trichocicinus* (Sacc.) Hoehnel (1926), Mitt. bot. Inst. tech. Hochsch. Wien **3**: 115. / = *Pyrenochaeta* de Not. subgen. *Trichocicinus* Sacc. (1905), Ann. Mycol. **3**: 512. Type sp.: *Chaetosticta perforata* (Ell. & Everh.) Petrak & H. Sydow (1925), loc. cit. p. 270. / == *Chaetomella perforata* Ell. & Everh. (1885), Jour. Mycol. **1**: 153. // J. L. Crane (1971), Canad. J. Bot. **49**: 31-34. Illinois fungi. 1. *Chaetosticta*. => *Chaetosticta perforata* is redescribed. // B. C. Sutton (1980), The Coelomycetes. p. 366-368.

**Photo**

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1201 = Habit. Pycnidia on b/c-medium.

1202 = Habit. Pycnidia on CMA.

1203, 1204, 1205, 1206 = Pycnidia, gently squashed.

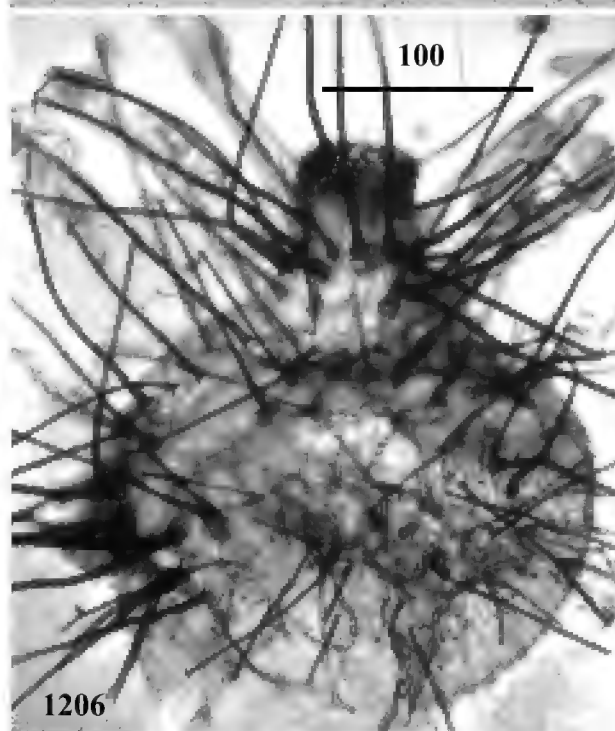
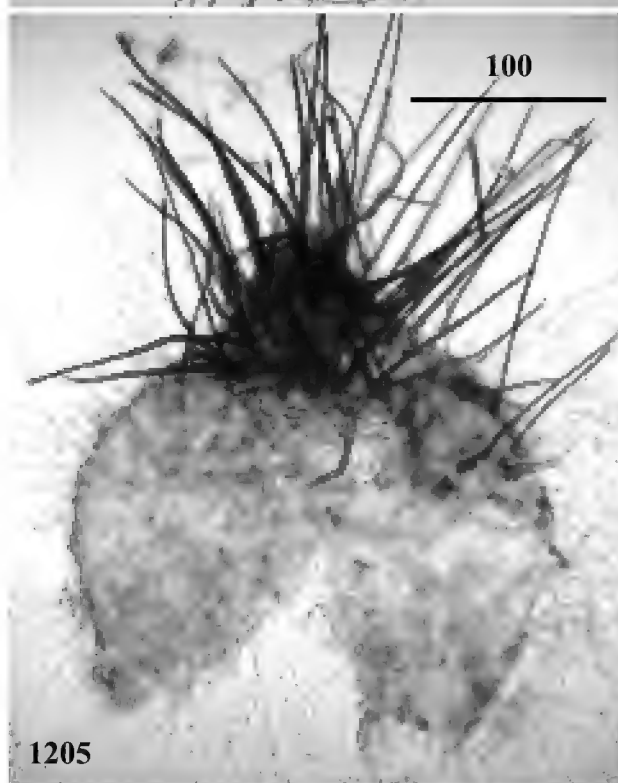
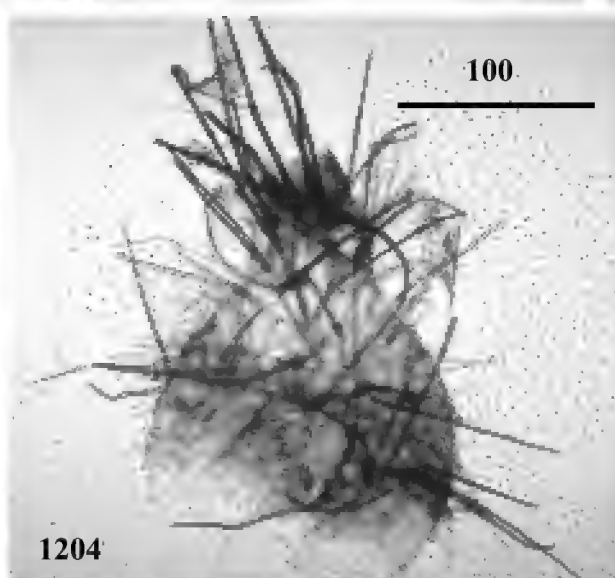
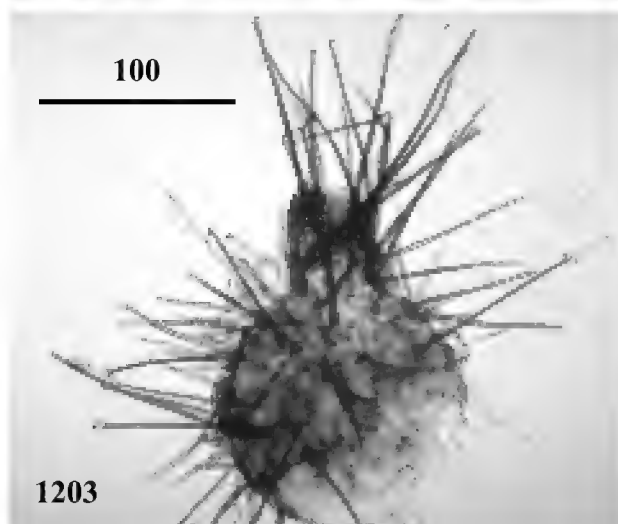
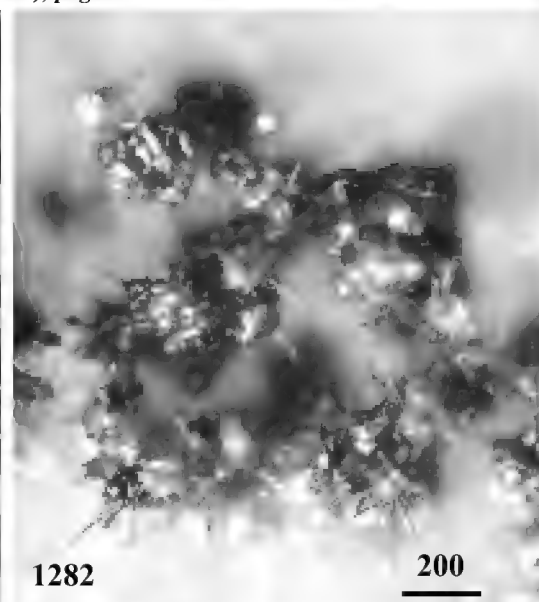
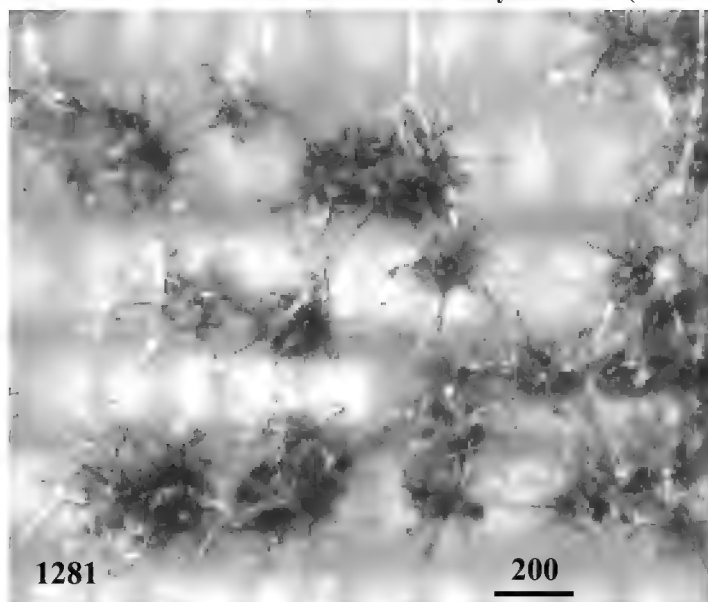
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1207, 1208 = necks of pycnidia.

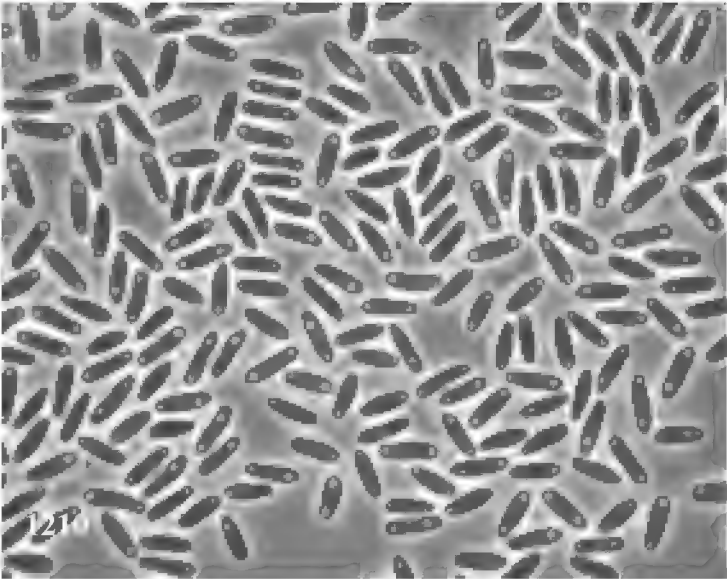
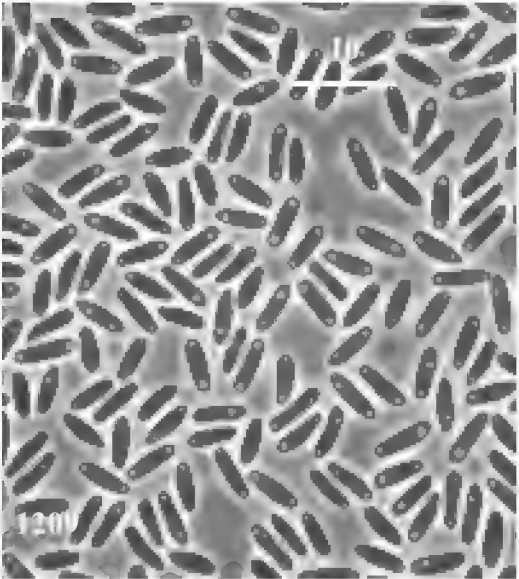
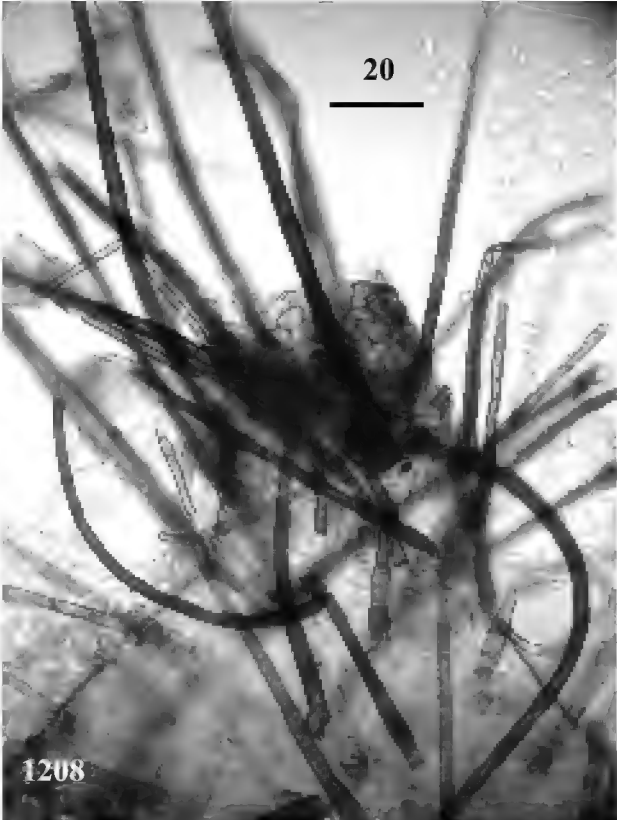
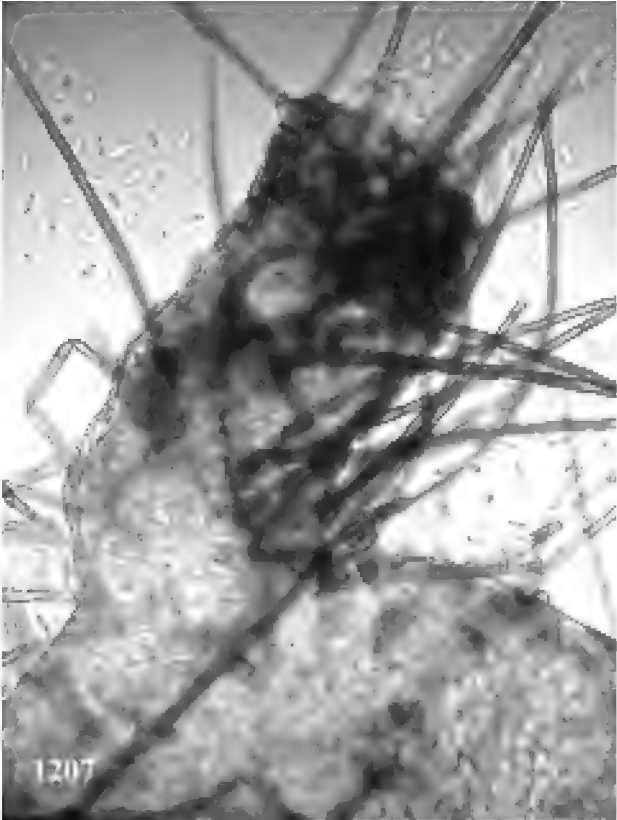
1209, 1210 = Conidia (by phase contrast).

page 207 (color plate)

1788, 1789 = Habit. Pycnidia on b/c-medium.







**1359** *Coniella castaneicola* ( Ell. & Ev.) Sutton (1980), The Coelomycetes, p. 420.

= *Gloeosporium castaneicola* Ell. & Ev. (1895), Proc. Acad. nat. Sci. Philad. 435.

= *Selenophoma kamatii* Kalani (1970), Sydowia 23: 203.

= *Coniella eucalypticola* Nag Raj (1976), Canad. J. Bot. 54: 1370.

**Descr** Coloniae in b/c-medio diffusae, hyphis aeriis sparsis, pycnidiis abundantibus dispersis sub lente velut punctis ateris. Pycnidia primum subepidermalia, innata-erumpentia, dissita ad 2-3 aggregata, globosa, ostiolata, (50-)75-250  $\mu$  diam., unilocularia, glabra, atera, basi convexo incolorato tumulo, qui pseudoparenchymatosus supra conidiophoras et cellulas conidiogenas ferens; pariete brunneo externe vis. textura angulari; ostiolo centrali circulari leviter protrudenti atrobrunneo, clypeo ( epistromate ) e cellulis albis angularibus vel globosis compositis circumcincto. Conidia fusiformia inaequilateralia unicellularia, (12.5-)18.5-26.5 x 2.5-4.0  $\mu$ , tenuitunicata laevia, pallide brunneola, modice fusca in massa: non vidi mucosa appendicem, qua descripta a Nag Raj ( in Coelomycetous anamorphs with appendage-bearing conidia, p. 229-231, 1993 ).

Coloniae in CMA diffusae, hyphis aeriis sparsis, pycnidiis dense dispersis. Hyphae vegetativae ramosae septatae hyalinae. Pycnidia similia eorundem in b/c-medio productorum, fere immersa, 60-250 (-290)  $\mu$  diam., clypea difficulter vidi.

**Hab** MFC-21026. E solo sylvae ( arbores dicotyledonum ); Kobe Municipal Arboretum, Kobe, Japan; April 2000.

**Ref** B. C. Sutton (1980), The Coelomycetes, p. 420. => *C. castaneicola* : conidia 15-29 x 2.5-3.5  $\mu$ , fusiform, falcate, pale brown. // T. R. Nag Raj (1993), Coelomycetous Anamorphs with appendage-bearing conidia, p. 229-231. => conidia fusiform or naviculate with a truncate base and an obtuse apex, 13-29 x 2.5-3.5(-4) [ 20.6 x 2.9 ]  $\mu$ , mean conidium length / width ratio = 7.1 : 1, with a mucoid appendage extending from the apex to base on one side of the conidium. // *Coniella clypeata* Matsushima (1996), in Mats. Myc. Mem. 9, p. 27, no. 1323, is similar to *Coniella castaneicola*, in the former the conidia are 15-20 x 2.5-3.5  $\mu$ .

#### Photo

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1211 = Habit. Conidiomata on b/c-medium.

1212, 1213 = Pycnidia, gently squashed, conidia mostly washed away.

1214, 1215, 1216, 1217 = Conidiomata on b/c-medium, in one month old culture, showing white clypea.

1218 = Fertile mound in pycnidium.

page 82

1219, 1220, 1221 = Fertile mounds in pycnidia. ( 1219, 1220 by phas contrast )

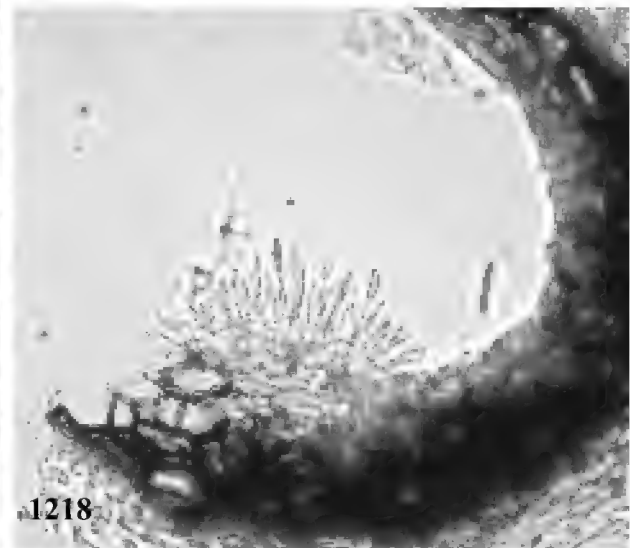
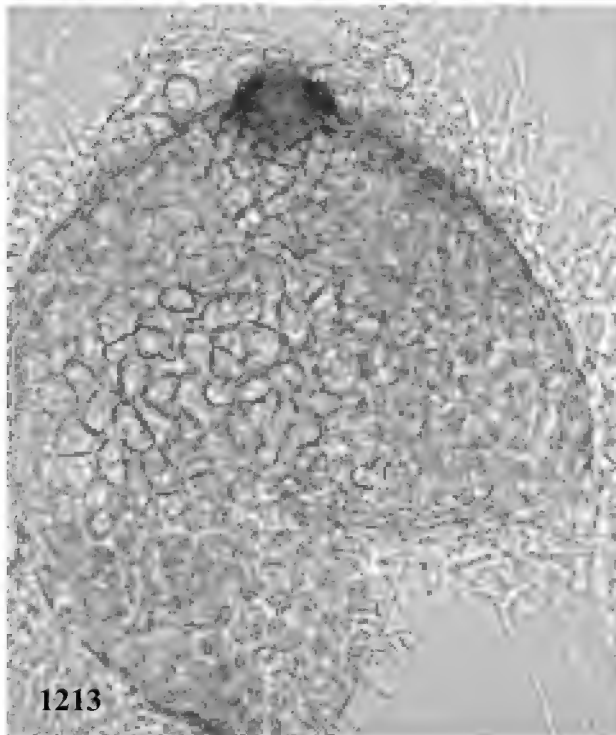
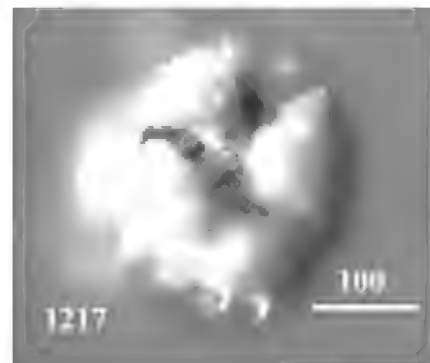
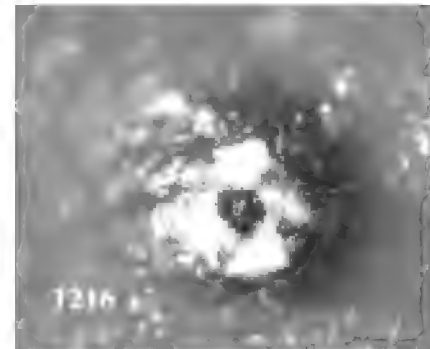
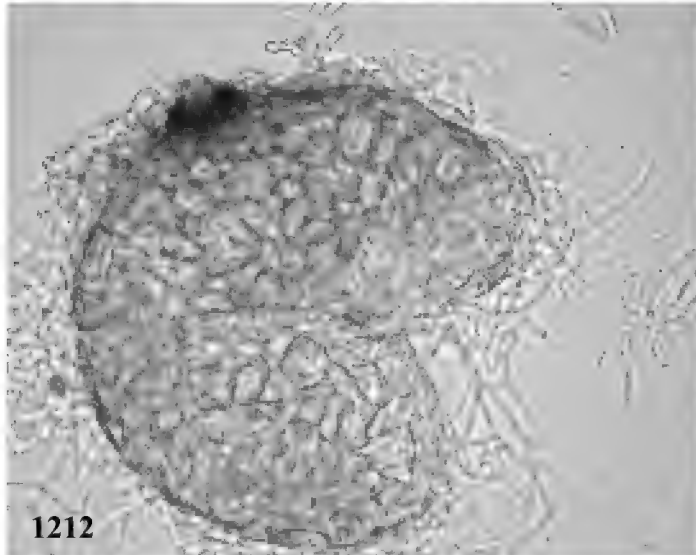
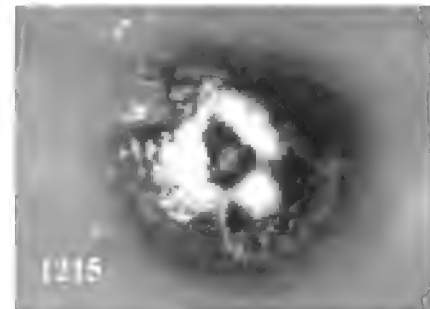
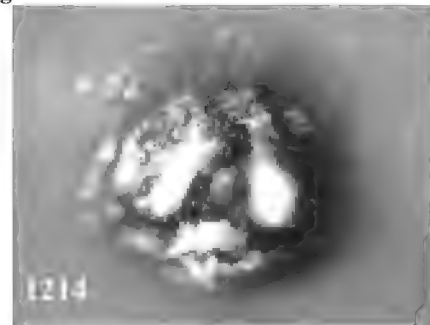
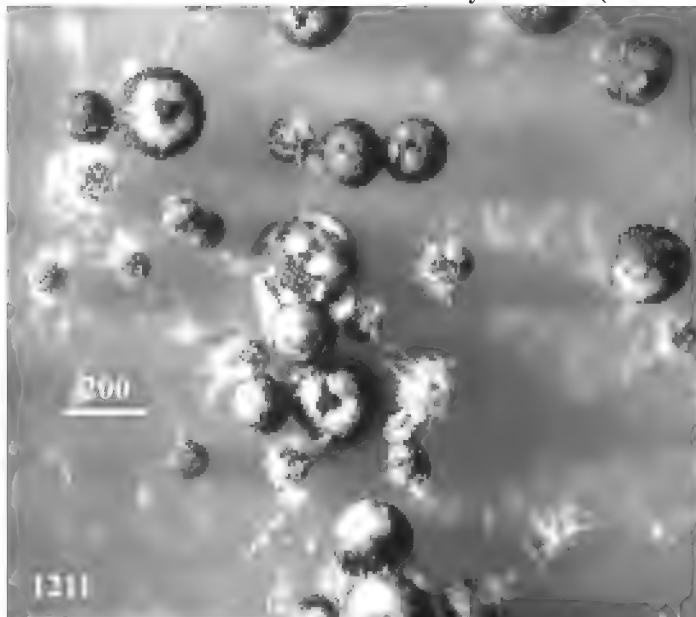
1222 = Clypeus, strongly squashed.

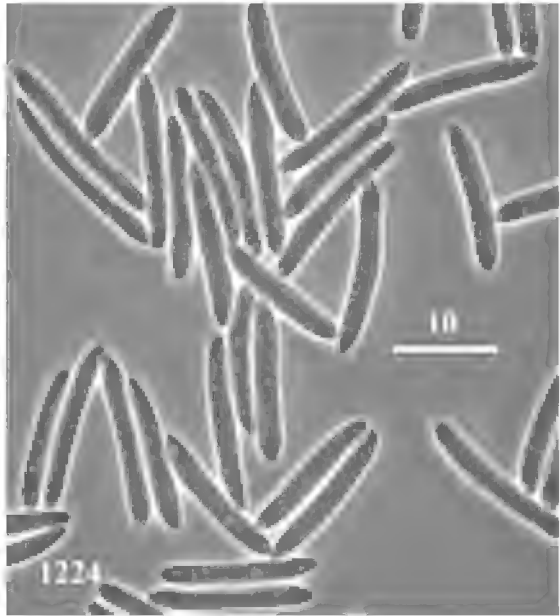
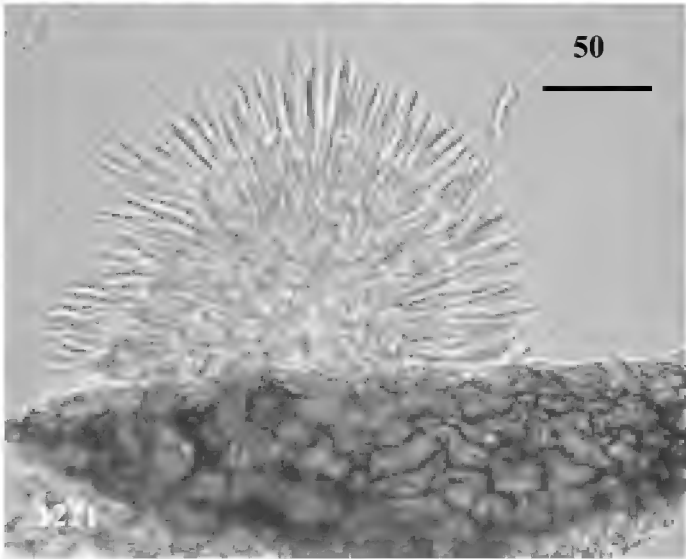
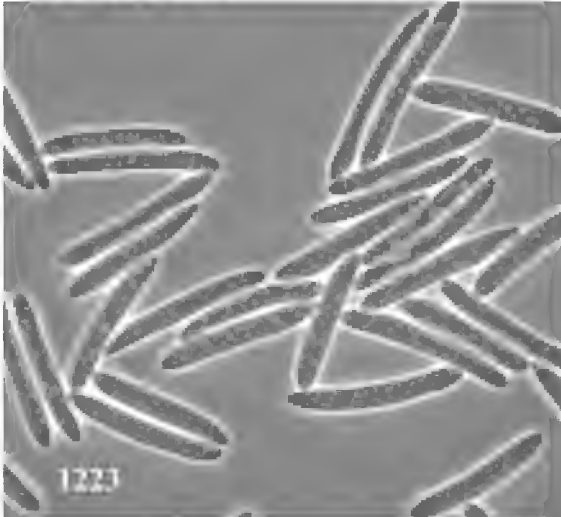
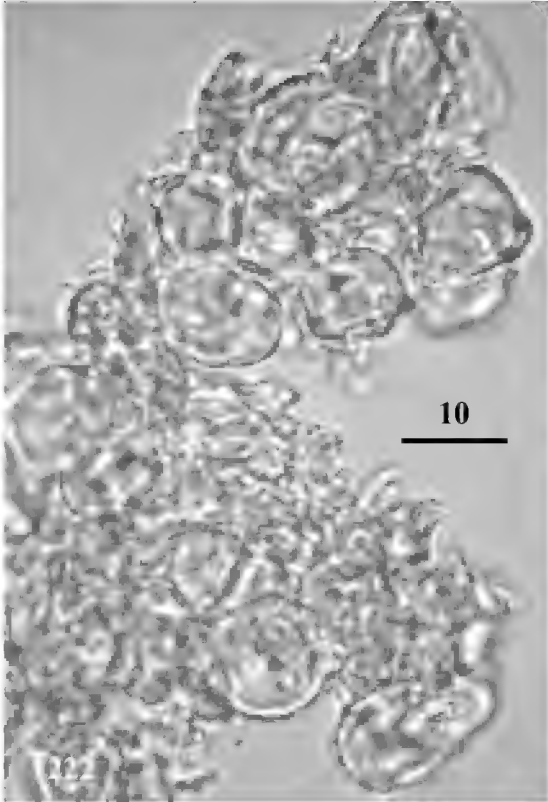
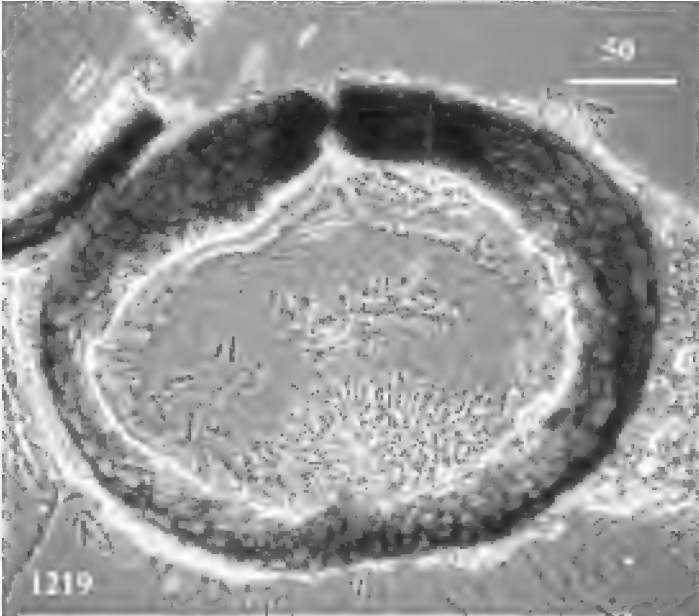
1223, 1224 = Conidia. ( by phase contrast )

page 208 ( color plate )

1790, 1791, 1792 = Habit. Conidiomata on b/c-medium.

1793, 1794, 1795, 1796 = Conidiomata on b/c-medium, in one month old culture, showing white clypea.





**1360 *Stagonospora basiangustispora* anam. sp. nov.**

**Descr** Coloniae in b/c-medio diffusae, modice floccosae, modice cinereae. Pycnidia dispersa, separata, fusca, e corpore globoso et collo longo cylindrico ( interdum collis duobus in quoque pycnidio ) composita: corpora in substrato immersa, globosa, 100-300  $\mu$  diam., unilocularia; parietes membranacei, bi-strati, strato exteriori 2-3 cellulis crasso, brunneo, a superficie vis. textura angulari, ex cellulis complanatis isodiametricis vel elongatis composito, strato extimo in parte carbonaceo secus septia, strato interiore tenui pseudoparenchymatico subhyalino ad hyalino, textura angulari, intrinsecus plusminusve textura globulosa, cellulis 5-9  $\mu$  diam. composito: colla cylindrica, e substrato extrudentia, hyphis usitatis modice brunneis oblecta, longitudine variabilissima, (30-)100-900  $\mu$  longa 25-40  $\mu$  lata, frequenter irregulariter flexa et frequenter diametro non uniformia, pariete a superficie vis. textura angulari. Conidiophora deficientia. Cellulae conidiogenae difficillime ex intimis cellulis parietis pycnidii distinguendae, hyalinae, globoideae ad angulares, ad orem latum blasticae arte annellidicae ( ores aspectu crassi-tunicata, haud distinguibilia ex oribus enteroblasticis-phialidicis ). Conidia cylindrica, 57.5-77.5 x 10.5-12.5  $\mu$ , (6-)7-septata, apice rotundata, prope basim abrupte angustata, basi truncata 1.5-2.5  $\mu$  lata ( indicativa conidia annellidica ), laevia, hyalina; conidia juventute ad basim pillo gelatinoso hyalino. Teleomorphosis ignota. **Etym.:** *basiangustispora* <="conidia narrowed at the base".

**Hab** E solo sylvae ( arbores dicotyledonum ); Kobe Municipal Arboretum, Kobe, Japan; Sept. 1999.

**Typus:** cultura b/c-medio exsiccata, MFC-21046.

**Mem** Placement of this fungus in *Stagonospora* or *Rhizopycnis* was wavered.

**Ref** B. C. Sutton (1980), The Coelomycetes. C.M.I., Kew. => p. 106: *Stagonospora padulosa* ( Sacc. & Speg. ) Sacc. (1884), lectotype species: conidiogenous cells holoblastic, annellidic; conidia fusiform, at the base conico-truncate ( fide Fig. C in p. 109 ), 6-8 septate, constricted at the septa, 41-67 x 8-11  $\mu$ , minutely guttulate. // J. Bissett (1982), Fungi Canadenses No. 239, and 240: *Stagonospora avenae* ( Frank ) c. nov. and *Stagonospora nodorum* ( Berk.) Castellani & Germano, respectively. In both species species conidia with obtuse or broadly truncate base, suggesting blastic conidiogenicity. // A. Leuchtmann (1984), Sydowia 37: 75-194. => *Phaeosphaeria* spp. and *Massarina* spp. with *Stagonospora* anamorphoses. *Stagonospora* state described are holoblastic, annellidic. // L. M. Carris, D. A. Glawe & G. Morgan-Jones (1987), Mycotaxon 29: 451-455. => *Stagonospora heteroderae* sp. nov.: conidiogenous cells phialidic with periclinal thickenings; conidia fusiform to cylindrical, mostly 3-septate. // By CMI Descriptions of Fungi and Bacteria No. 1020 (1990), the conidial ontogeny of *Stagonospora meliloti* is enteroblastic-phialidic. // D. F. Farr (1998), Mycologia 90: 290-296. => *Rhizopycnis vagum* gen. et sp. nov. The main features are : conidiomata pycnidia; conidiophora deficientia; cellulae conidiogenae cylindricae ad ampulliformes, apice enteroblastic-phialidicae; conidia hyalina aetate fuscascentia, 1-3-septata, basi obtusa vel obconice truncata. ( Fig. 3 in page 293 shows very clearly the periclinal wall thickening of conidiogenous cells. The thickening seems to be multi-layered *mihi*. )

**Photo**

page 84

1225 = A neck of a young pycnidium.

1226 = Part of squashed pycnidial wall.

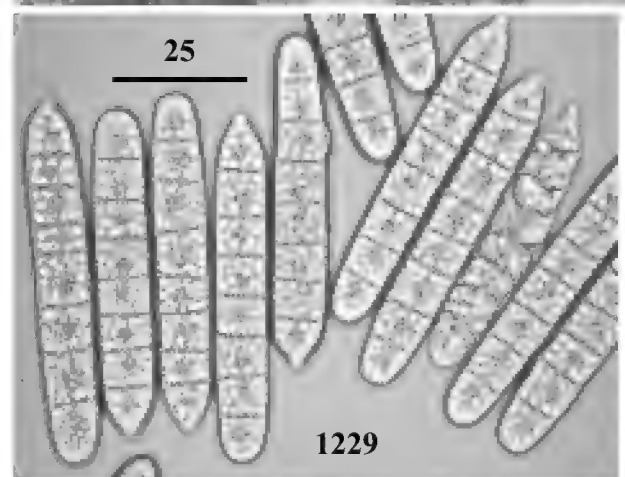
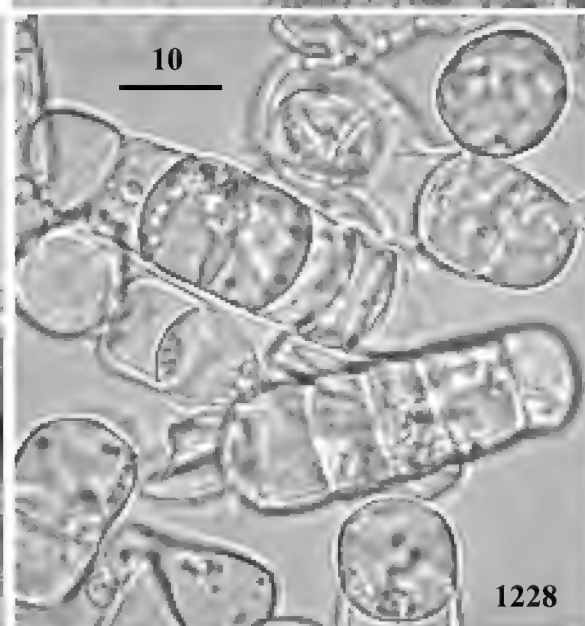
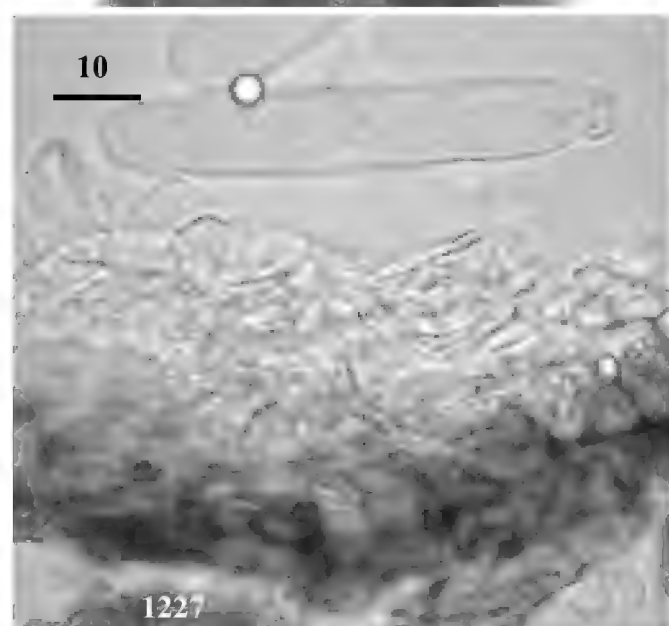
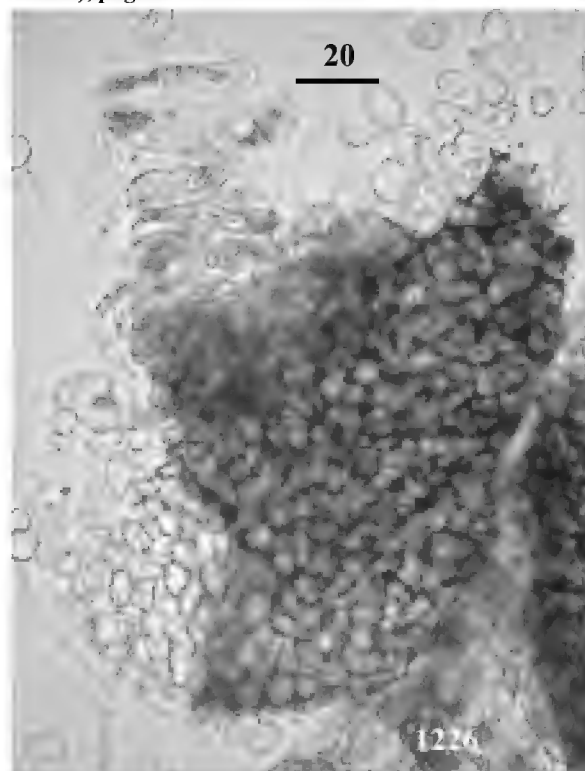
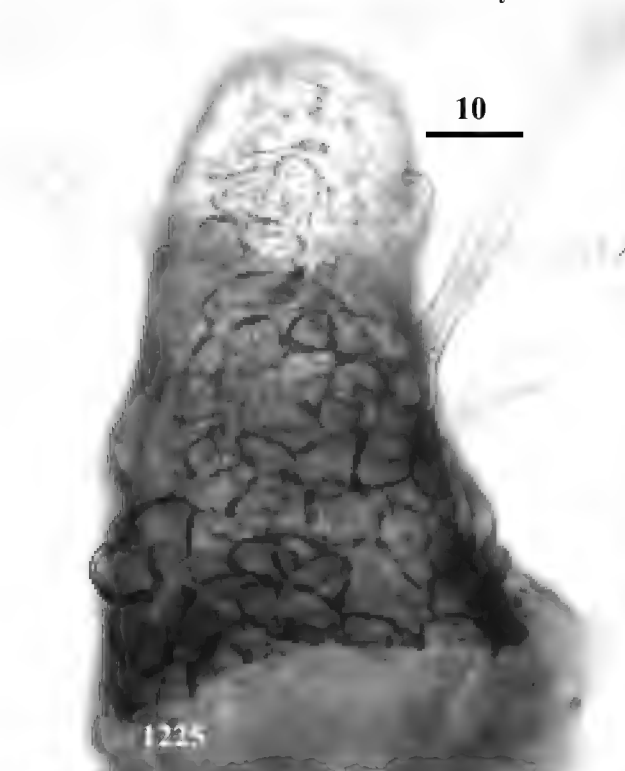
1227 = Part of pycnidial wall in section and a young conidium which bearing a gelatinous cap at the base.

1228 = Aged deteriorated conidia, showing the nature of conidial septa.

1239, 1230 = Conidia, focused on septa.

page 208 ( color plate )

1797, 1798, 1799 = Pycnidia on b/c-medium.





**1361 *Conidiocarpus longicollus* anam. sp. nov.**

**Descr** Coloniae in CMA lente crescentes, hyphis aeriis pauperis, atro-olivaceae, parte centrali conidiomatibus abundantibus. Conidiomata dissita ad gregaria, fusca, elongatissima, e tribus partibus constata: (1) inferne caulis cylindricus, (2) medio pars unilocularis, (3) superne collum longum apice fimbriatum. (1) Caules superficiales praeter partem basalem in agarò immersam, cylindrici, in longitudine variabiles, 0 ( nonnumquam ubi sine caule )-1250  $\mu$  longi, 35-75  $\mu$  lati, centro non perforati, strato exteriore textura oblita, e hyphis 3-7  $\mu$  latis, verruculatis, inferne subhyalinis sursum modice brunneascentibus composito, strato interiore e hyphis parallelis septatis hyalinis 2.5-4  $\mu$  latis composito. (2) Partes uniloculares cylindricae, precipue leviter inflatae, 100-200  $\mu$  longae 35-85  $\mu$  latae; paries textura oblita, una cellula crassus, e hyphis septatis, 2.5-6  $\mu$  latis, verruculatis, modice brunneis compositus, cellulis luminibus deminutis: hyphae fertiles intra ad fundum loculi ad hyphas paralleles caulis terminaliter integratae vel discretae, supra cellulas conidiogenas catenatas transformatae, more *Pyrenochaetae* sensu Sutton (1980): cellulae conidiogenae cylindricae doliiformes conicae ampulliformesve, 5-11 x 2.5-4.5  $\mu$ ; colla brevia apice ad 1-2  $\mu$  angusta enteroblastica-phialidica pariete periclinali spissesscenti, lateralia proxime sub septia transversalia praedita vel ubi terminalia apice praedita. (3) Colla anguste cylindrica, rigida, centro perforata, apice fimbriata, longitudine variabilia, exclusis fimbriis (100-)300-910  $\mu$  longa, inferne 15-31.5  $\mu$  lata, sursum ad orem 8.5-17.5  $\mu$  angusta, inferne fusca, sursum pallidia; paries textura oblita, una cellula crassus, e hyphis parallelis connatis compositus, cellulis luminibus deminutis, parte inferiore 2.5-6  $\mu$  lata, sursum ad orem 2-2.5  $\mu$  angusta, modice brunnea; ad orem hyphae connatae liberascens transformatae in 10-15 fimbrias, quae extrosus flexae subulatae incoloratae 20-75  $\mu$  longae basi 2-2.5  $\mu$  latae 0-2-septatae. Conidia oblonga unicellularia, 3.0-4.0(-4.5) x (1.5-)1.8-2.3(-2.5)  $\mu$ , laevia hyalina, pallide cremea, firme conglutinata in massa. Interdum ramosa conidiomata ( quae similia *Conidioxyphii gardeniori* in B. C. Sutton (1980), The Coelomycetes, p. 393 ) formata. Teleomorphose non vidi. **Etym.**: *longicollus* <= this species "having long neck".

**Hab** Ad folium mortuum *Sasae* sp.; Takatsuki City, Osaka Pref., Japan; Nov. 1998. **Typus**: cultura CMA exsiccata, MFC-21008.

**Mem** The present species is similar to *Conidiocarpus caucasicus* Woronichin in Jaczewski (1917), type species, in the conidial size, which is 4-5 x 1.5  $\mu$ , fide Hughes (1976).

**Ref** W. Yamamoto (1954), Ann. Phytopath. Soc Jap. **19**: 1-5. Taxonomic studies on the *Capnodiaceae*. II. On the species of the *Eucapnodiaceae*. => p. 4: *Scorias communis* sp. nov., anamorph was described but not named; from the description and figures *mihi* it belongs to *Conidiocarpus*. // A. C. Batista & R. Ciferri (1963). The sooty-molds of the Family *Asbolisiaceae*. Atti Ist. Bot. Univ. Pavia, Quaderno no. 31. // A. C. Batista & R. Ciferri (1963). *Capnodiales*. Saccardo no. 2. // A. Kafi & K. Rizvi (1971), Mycopathologia **45**: 317-325, p. 323-324. => Fungus described as *Podoxyphium* sp. is rather deviated from the type species. // S. J. Hughes (1976), Mycologia **68**: 693-820. Sooty moulds. => p. 727, 764-766: *Conidiocarpus* Woronichin in Jaczewski (1917) / = *Podoxyphium* Spegazzini (1918) / = *Conidioxyphium* Batista & Ciferri (1963). // A. Sivanesan (1984), The bitunicate Ascomycetes and their anamorphs, J. Cramer. => p. 28-30: *Scorias* Fr.

**Photo**

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1231 = Habit. Ceratopycnidia on CMA, after one month at 25°C.

1232, 1233 = Ceratopycnidia.

1234 = Ceratopycnidium which almost lacking stalk part.

1235 = Ceratopycnidium, squashed.

1236 = Conidia. ( by phase contrast )

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1237, 1238 = Ceratopycnidia, squashed.

1239 = Peridium, upper locular part.

1240 = Peridium, lower locular part.

1241, 1242, 1243 = Stalk parts of ceratopycnidia.

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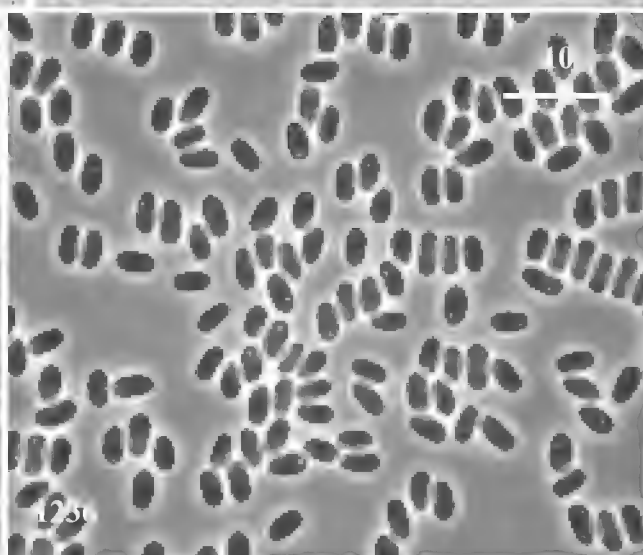
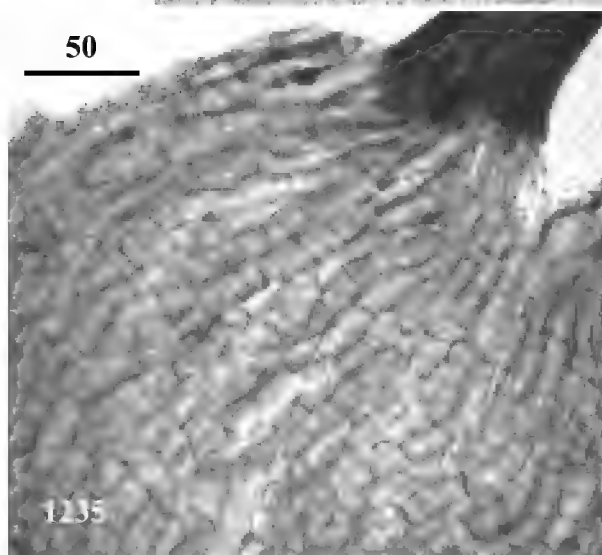
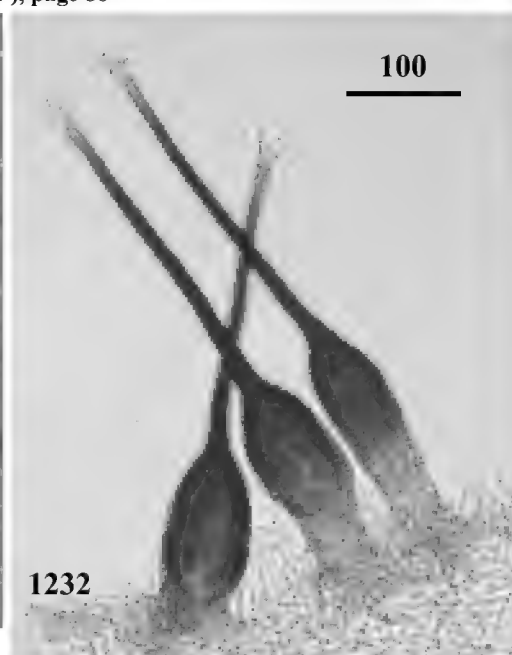
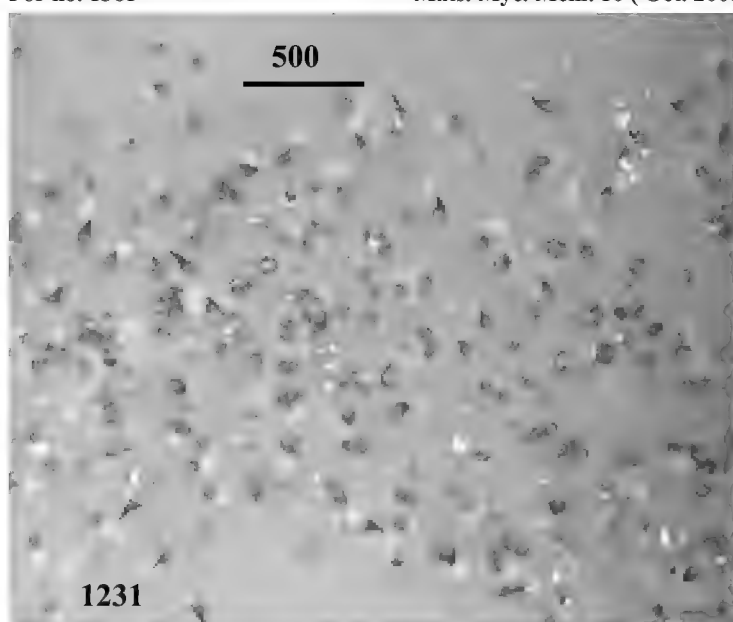
1244, 1245 = Neck parts of ceratopycnidia, squashed.

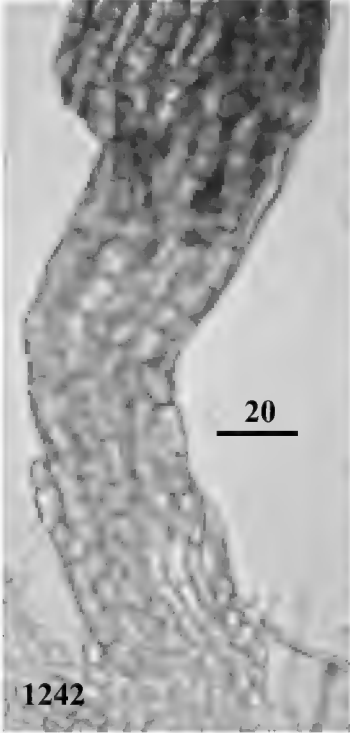
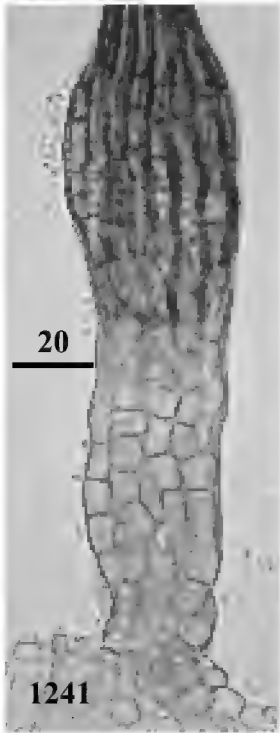
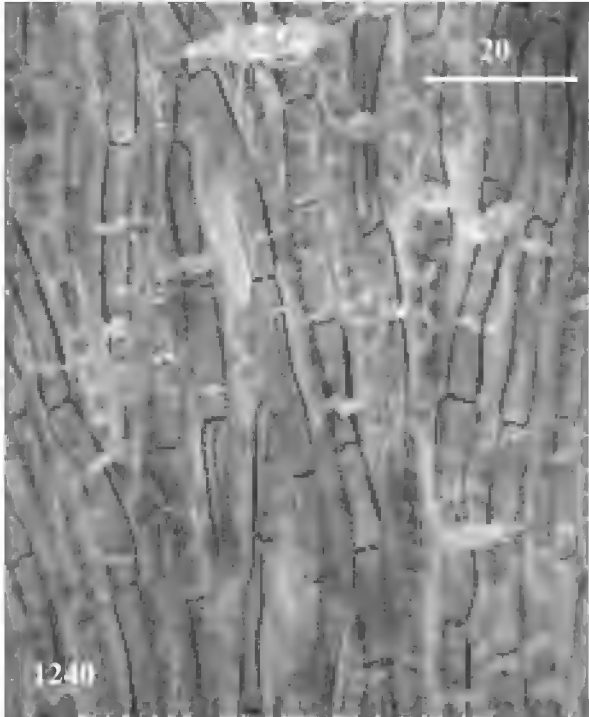
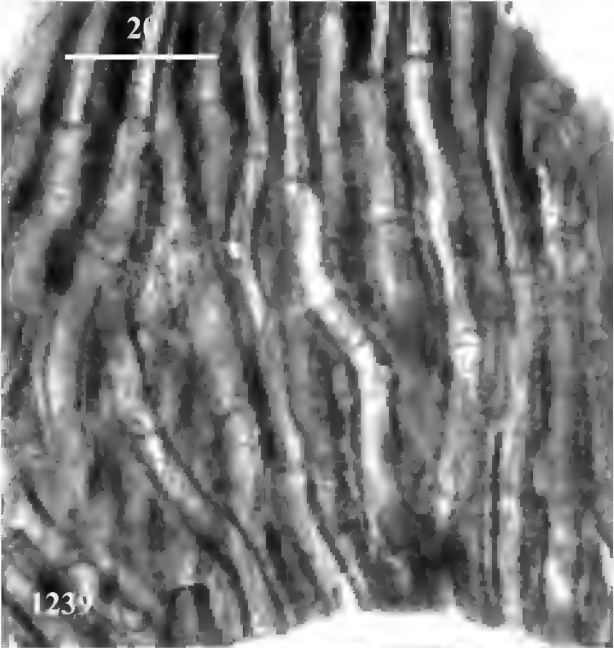
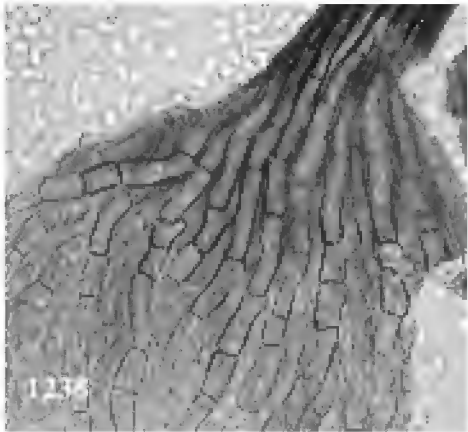
1246 = Section of stalk part.

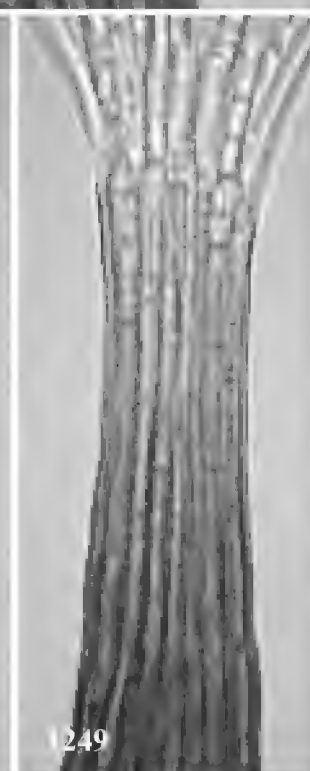
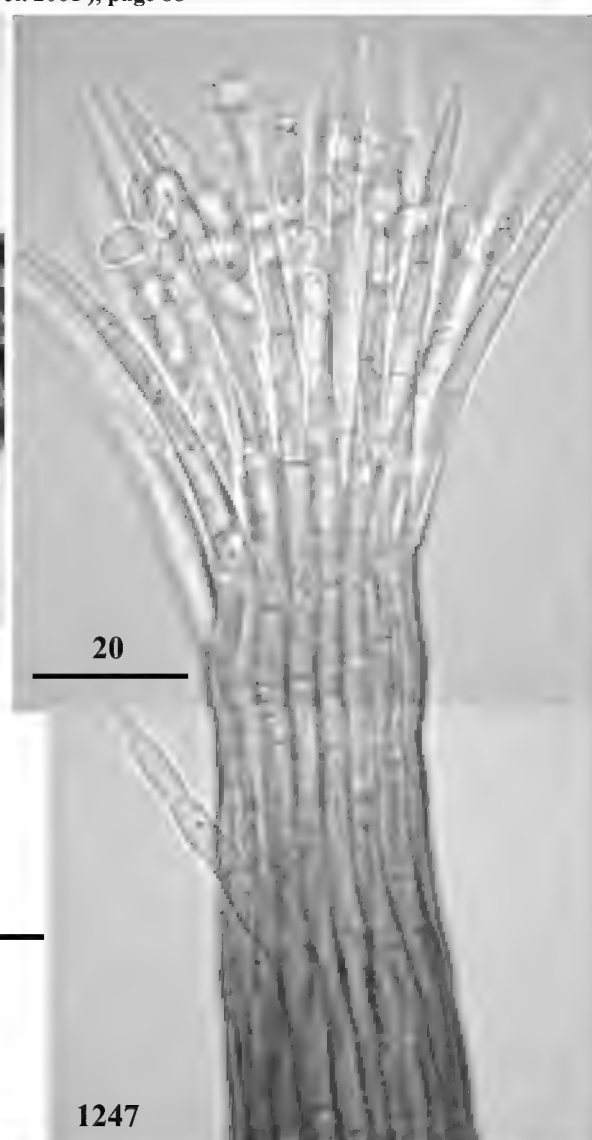
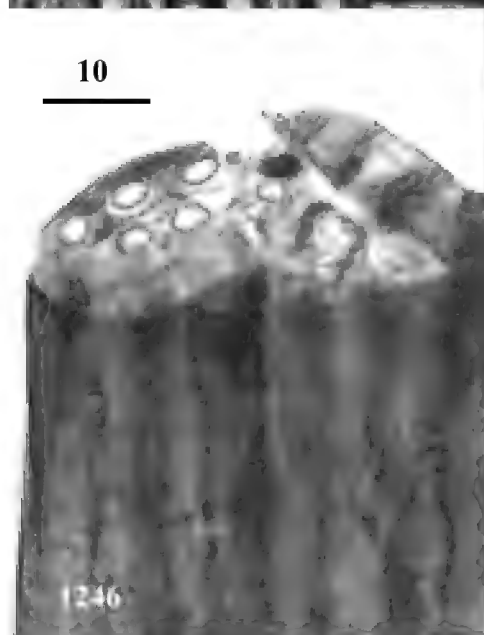
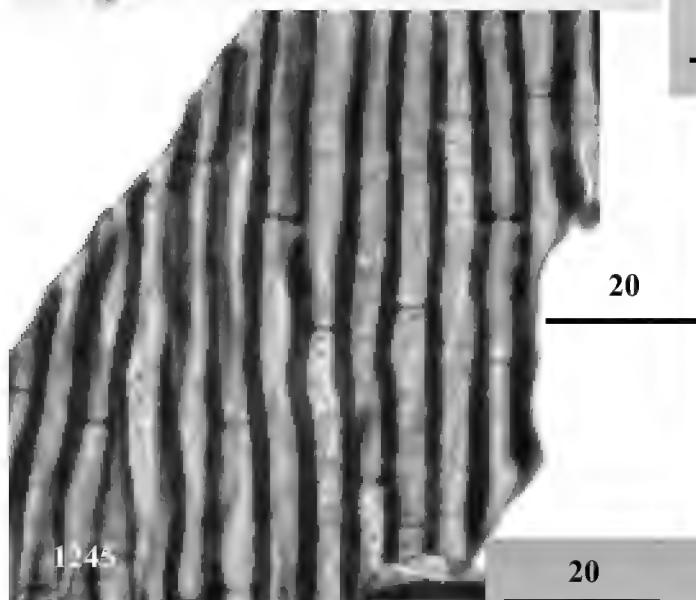
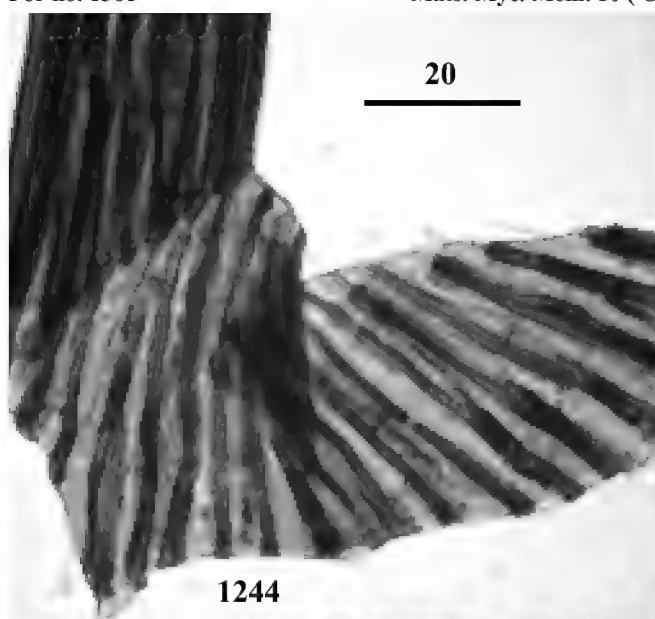
1247, 1248, 1249 = Apical parts of necks.

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Fig. 884 = Catenate conidiogenous cells ( not depicted for scale ).







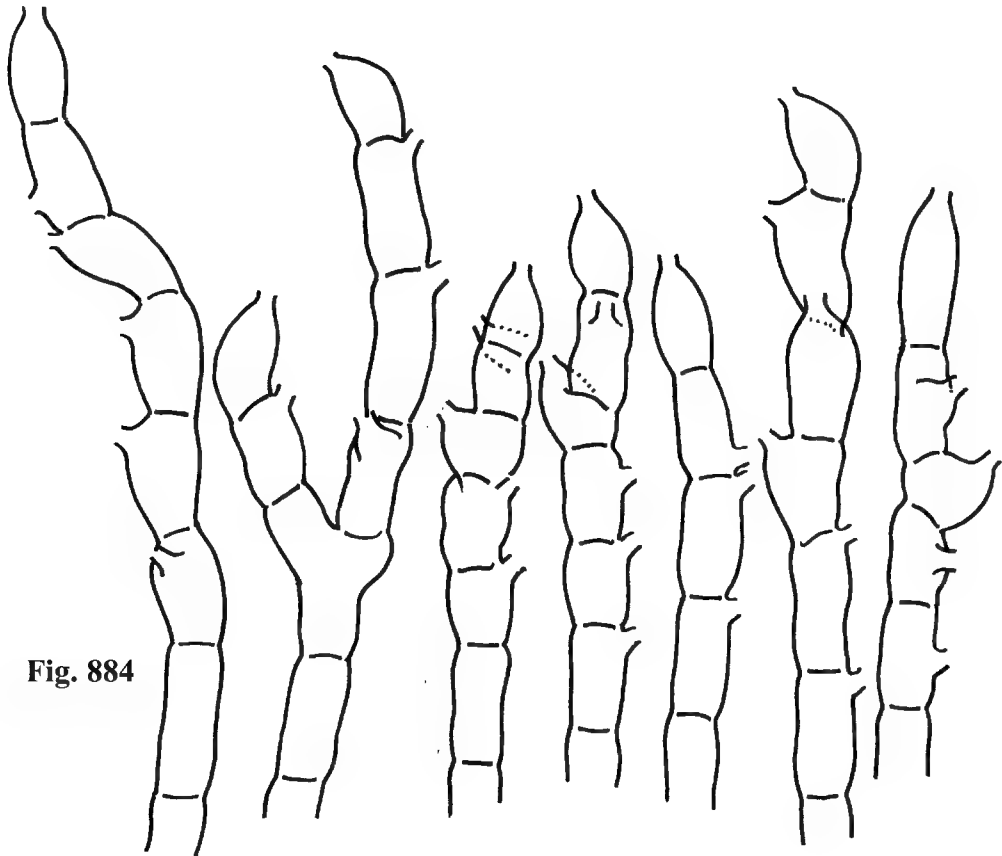


Fig. 884

**1362 *Ascochytopsis aggregata* anam. sp. nov.**

**Descr** Coloniae in CMA lentissime crescentes, aetate unius mensis ca. 1-2 mm in diam., in aerea centrali conidiomatibus dense aggregatis brunneo-ateris, margine angusto albido tenuiter coacto. Hyphae vegetativae ramosae, septatae, 0.7-1.5  $\mu$  latae, laeves, hyalinae. Stromata tumescentia, in agarō immersa, brunneo-atera, ex hyphis intricatis modice fuscis composita, magnitudine variabilia, aspectu apicali plusminusve circularia vel irregularia, 200-1200  $\mu$  diam., margine indefinito. Conidiomata sunt pycnidioidea, stromate superficialia vel subimmersa, dense aggregata, atrobrunnea, unilocularia, forma et magnitudine variabilia, praecipue ovoidea ad cylindro-ellipsoidea (125-)200-300  $\mu$  longa 85-135(-200)  $\mu$  lata, ubi cylindrica usque ad 500  $\mu$  longa, maturitate apice ore circulari 45-100  $\mu$  diam. per processum lysigenum. Peridium partibus duobus compositum: pars extima textura laxe intricata, e hyphis 1.5-3  $\mu$  latis brunneis composita; pars interna crassa pseudoparenchymatosa, e cellulis angularibus vel globosis composita, cellulis exterioribus pallide fuscis ad subhyalinis 3-6  $\mu$  in diam., cellulis interioribus hyalinis 2.5-3  $\mu$  in diam. Conidiophora fere deficientia, ubi presentia cylindrica, 0-1 septata, 5-10  $\mu$  longa, 2-3  $\mu$  lata, laevia, hyalina. Cellulae conidiogenae ex extimis cellulis parietis oriundae, cavitatem ascomatis tegentes, cylindricae, 6.5-22  $\mu$  longae, 1.5-2.5  $\mu$  latae, a subapice ad apicem angustascentes, laeves, hyalinae, ad ores enteroblasticae-phialidicae parietibus periclinalibus inconspicue spissescitibus. Conidia anguste falcata, 0-3-5 obscure septata, (25-)35-50  $\mu$  longa, circum medium 2.0-2.5  $\mu$  lata, utrinque versus gradatim angusta, apice ad 0.6-0.7  $\mu$ , basi truncata vel obtusa c. 1.0  $\mu$  lata, contento maxime guttulata, laevia, hyalina, griseo-alba ad brunneo-alba mucosa in massa. Teleomorphosis ignota.

Fructificatio in b/c-medio paupera. **Etym.**: *aggregata* <= conidiomata "aggregata".

**Hab** E solo sylvae ( arbores dicotyledonum ); Kobe Municipal Arboretum, Kobe, Japan; Sept. 1999.  
**Typus**: cultura CMA exsiccata, MFC-21073.

**Mem** For identification following taxa are taken into consideration: *Corniculariella* Karsten (1884), *Ascochytopsis* P. Henn. (1905), *Selenophoma* Maire (1906), *Pseudoseptoria* Speg. (1910).

**Ref** B. C. Sutton (1980), The Coelomycetes. C.M.I. , page 548-552. // F. DiCosmo (1978). Canad. J. Bot. **56**: 1665-1690. => Char. emend. of *Corniculariella* Karsten (1884).

**Photo**

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1250 = Habit. Conidiomata on PDA inocula on CMA.

1251 = Habit. Conidiomata on CMA.

1252 = Conidiomata, taken out from b/c-medium.

1253, 1254 = Surface view of the outermost peridia, textura intricata. ( squashed )

1255 = Outer tissue of peridium. ( squashed )

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1256 = Inner tissue of peridium. ( squashed )

1257, 1258, 1259 = Transverse sections of upper part ( neck-part ) of conidiomata.

1260 = Transverse section of conidioma, in lower part.

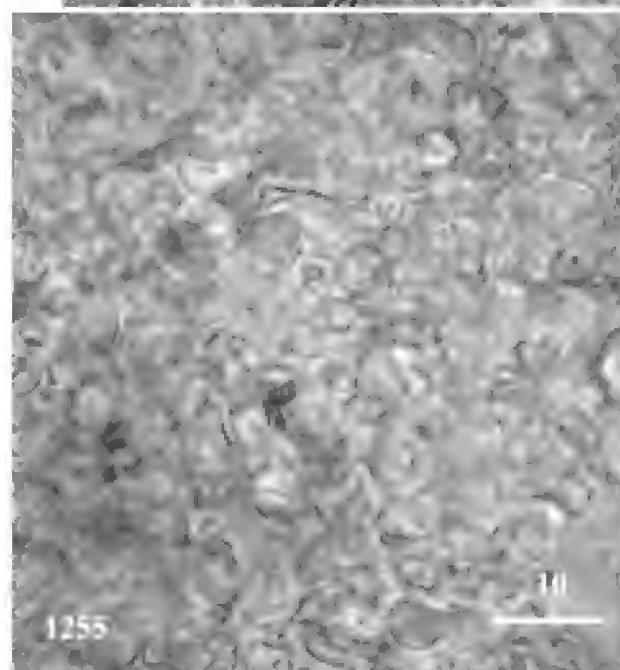
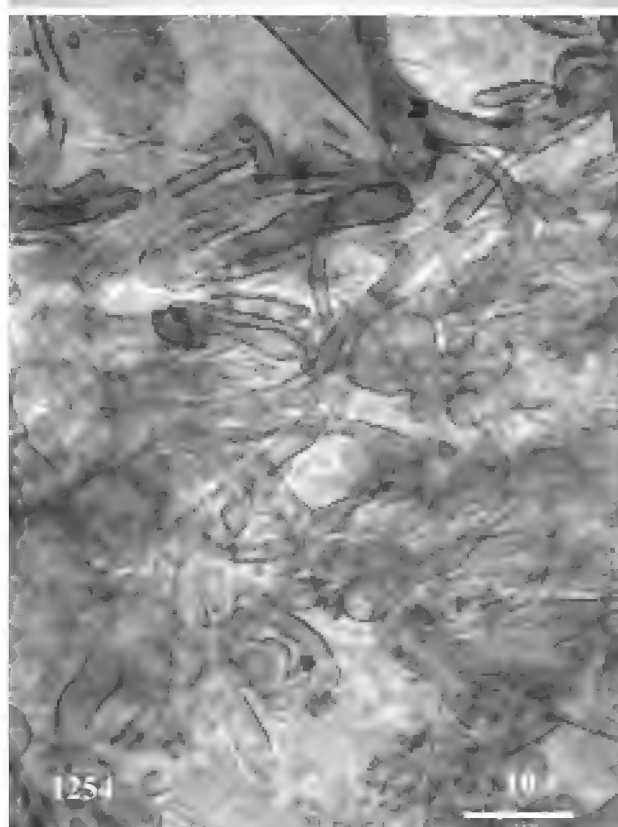
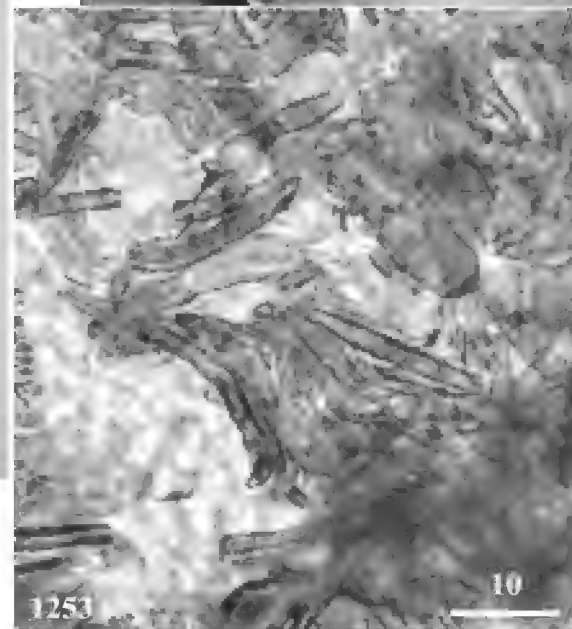
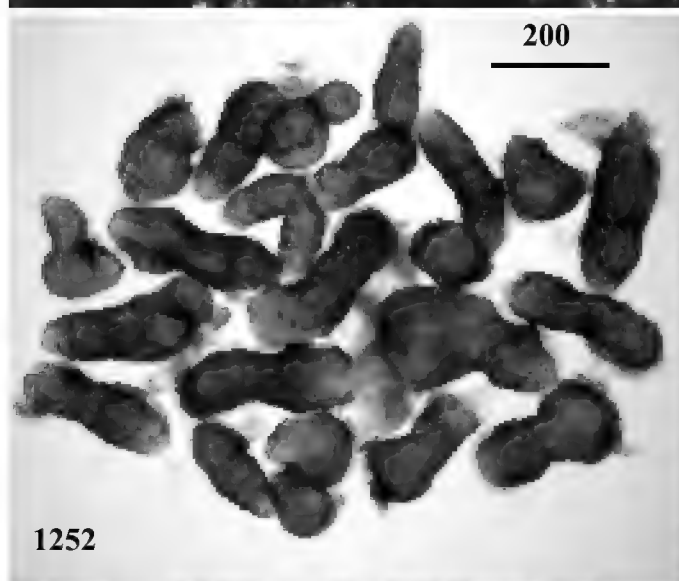
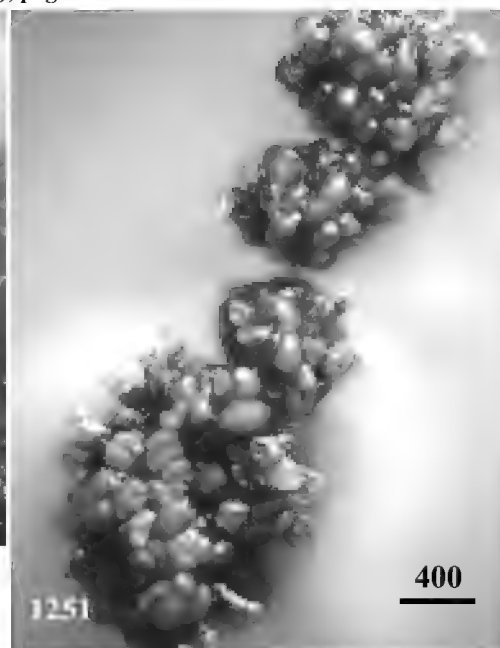
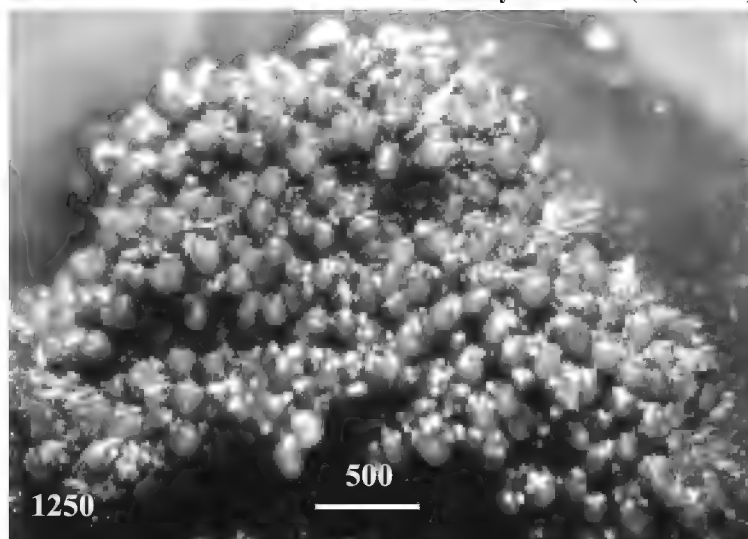
1261 = Innermost part of conidioma, at bottom, showing conidiogenous cells and conidia.

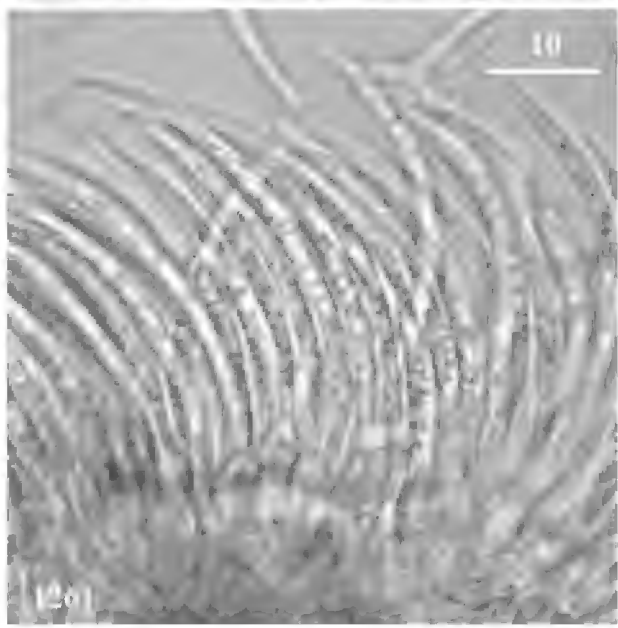
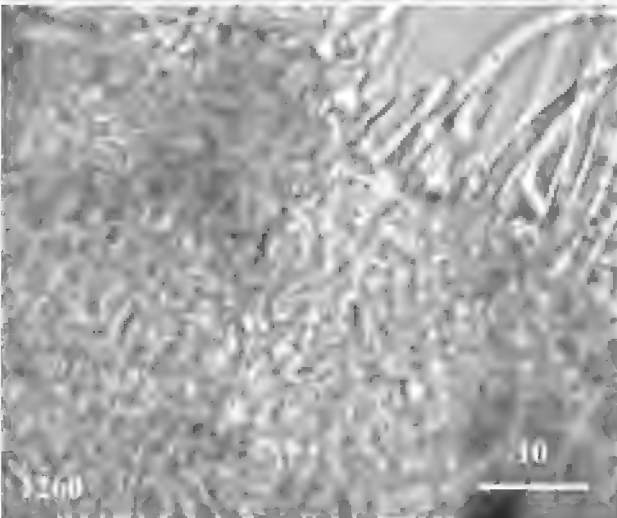
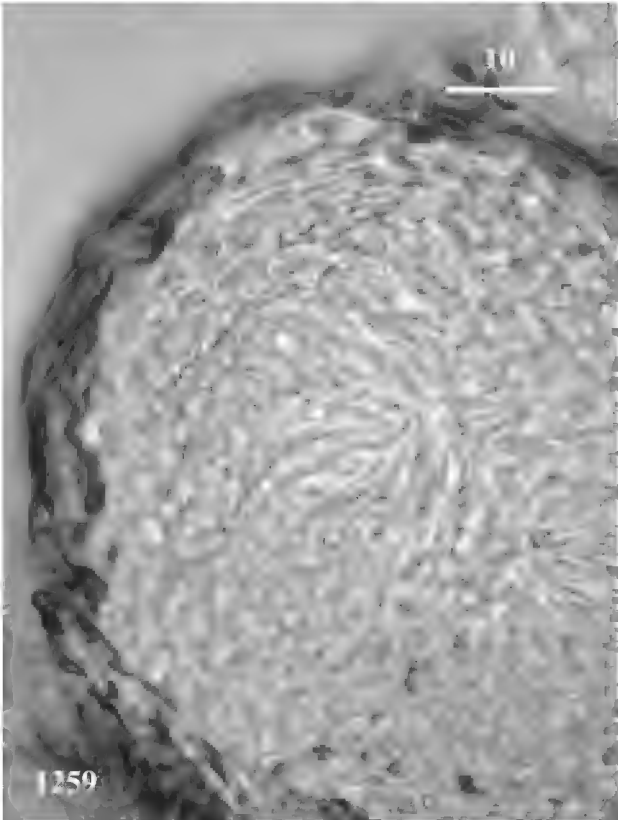
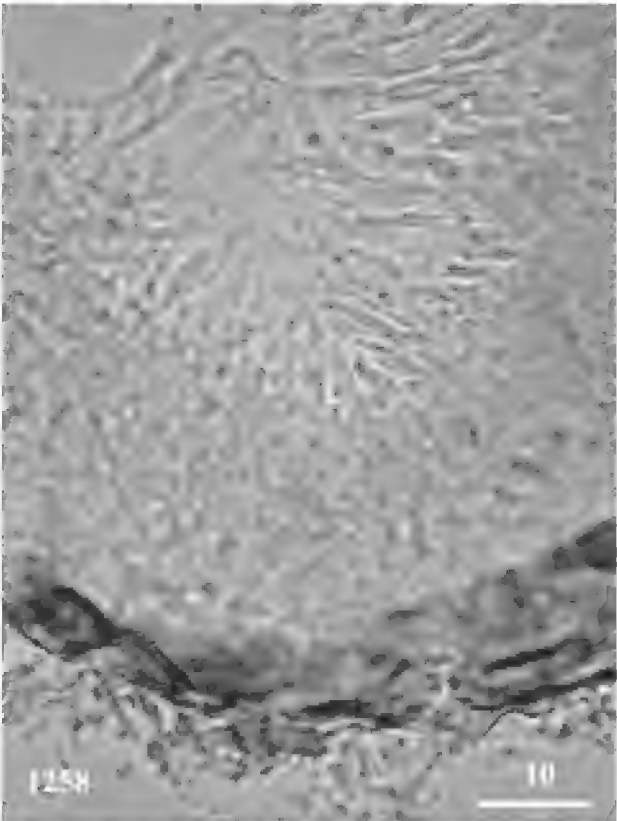
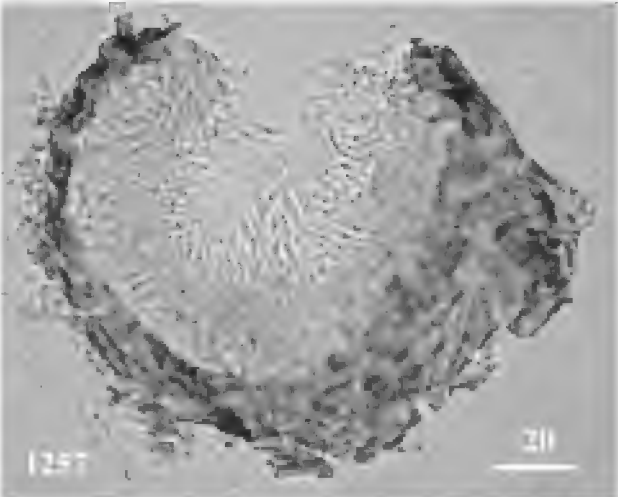
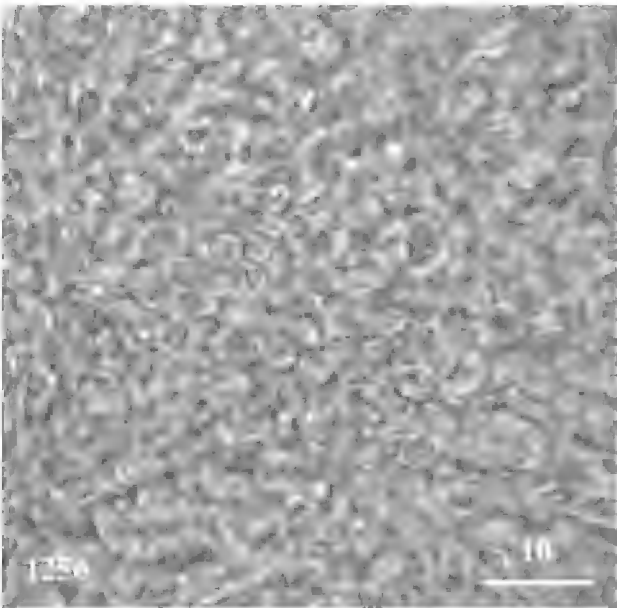
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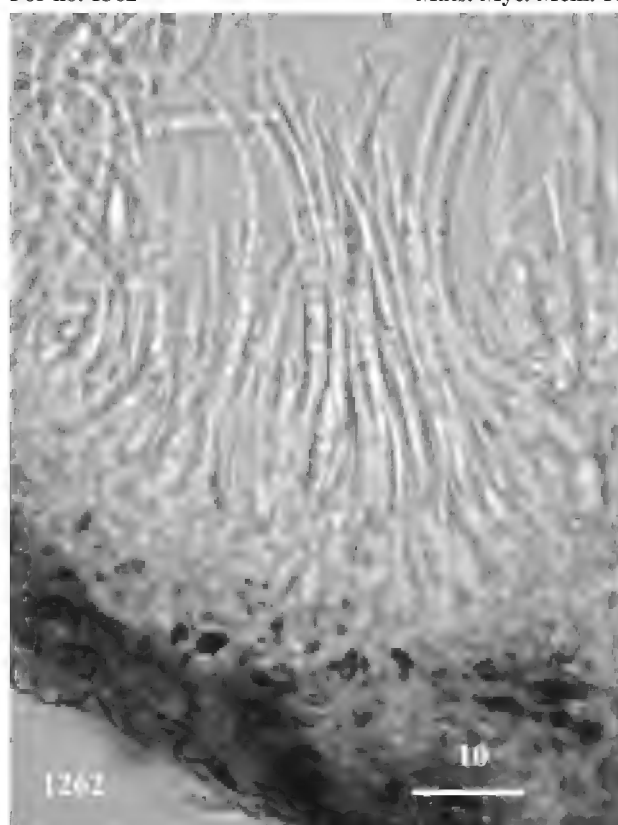
1262 = Transverse section of conidioma, in lower part.

1263, 1264 = Conidia. ( by phase contrast )









***Tholomyces*** anam. gen. nov.

Conidiomata eustromatica, semi-immersa, aspectu apicali circularia; stromata basalia pseudo-parenchymatica, pulvinata, hyalina vel pallide colorata, latere et supra ( sed non fundo ) pariete fusco oblecta, e latere vis. tholiformia: paries membranaceus, textra intricata et parte interiore plusminusve textura angulari, fuscus; non-ostiolatus, maturitate irregulariter rumpens, postremo conidiomata cupulascentia, exposita massa conidiorum. Conidiophora deficientia. Cellulae conidiogenae e cellulis exterioribus stromatis oriundae, lageniformes, cellulis stromatis similes vel subsimiles, apice in collum angustatae; colla postremo crassitunicascentia ob proliferationes spisse blasticas ( more *Scopulariopside* ), frequenter elongascentia. Conidia lunata, unicellularia vel 1-septata, hyalina, in massa mucosa hyalina vel pallide colorata. **Etym.:** *Tholomyces* <= *tholus* dome; *myces* indicating a fungus. Species typica postero sectione.

**1363 *Tholomyces flagellifer*** sp. nov.

**Descr** Coloniae in CMA tarde crescentes, hyphis aeriis nullis, pallidissime aurantiacae, margine definito, parte centrali conidiomatibus fuscis dense aggregatis. Hyphae vegetativae ramosae, septatae, 1-2.5(-3)  $\mu$  latae, laeves, hyalinae. Conidiomata solitaria vel gregaria, eustromatica, crasse pulvinata, semi-immersa, aspectu apicali circularia, 40-190  $\mu$  in diam.; stromata basalia pseudo-parenchymatica, hyalina vel pallidissime aurantiaca, e cellulis angularibus 3-5  $\mu$  in diam. composita, latere et supra ( sed non fundo ) pariete fusco oblecta, e latere vis. tholiformia; paries membranaceus, fuscus, e stratis duobus compositus: strato exteriori textura intricata, una cellula lato, ex hyphis 2-3  $\mu$  latis septatis fuscis laevibus composito; strato interiori 1-2 cellulis lato, plusminusve textura angulari, ex cellulis angularibus 2-3(-3.5)  $\mu$  in diam. fuscis laevibus composito; paries supra non-ostiolatus, sed maturitate irregulariter rumpens; postremo conidiomata cupulascentia, exposita massa conidiorum. Conidiophora deficientia. Cellulae conidiogenae e cellulis exterioribus stromatis oriundae, lageniformes, cellulis stromatis subsimiles, 5-7  $\mu$  longae, 2.5-5  $\mu$  latae, apice in collum angustatae; colla postremo crassitunicascentia ob proliferationes spisse blasticas ( more *Scopulariopside* ), 1.2-1.5  $\mu$  lata, frequenter usque ad 6  $\mu$  elongascentia. Conidia peranguste obclavata, C-formiter curva, 20-40  $\mu$  longa, parte latissima 1.5-2  $\mu$  lata, sursum gradatim ad 0.5-0.6  $\mu$  attenuata, flagelliformia, basim versus angustata, basi truncata vel obtusa, ca. 1  $\mu$  lata, fere continua interdum circum partem latissimam 1-septata, laevia, hyalina, pallidissime aurantiaca mucosa in massa. Additamento ad conidiomata supra descripta, sporadicis pallide aurantiacis pionnotes-sporodochiis ( conidiomatibus sine peridio fusco ). Teleomorphosis ignota.

Coloniae in PDA tarde crescentes, margine definito, hyphis aeriis nullis, pionnotes-sporodochiis pallide aurantiacis dense dissetis, sed fere sine conidiomatibus supra descriptis ( fere sine conidiomatibus cum peridio fusco ). In b/c-medio fructificatione paupera. **Etym.:** *flagellifer* <= conidia "flagelliform" in upper part.

**Hab** E solo sylvae ( arbores dicotyledonum ); Okayama Arboretum, Okutsu-cho, Okayama Pref.; Aug. 1999. **Typus:** cultura CMA exsiccata, MFC-12063.

**Phot**

page 95

1265, 1266, 1267, 1268 = Habit. conidiomata on CMA plates.

1269, 1270 = Habit, pionnotes on PDA plates.

page 96

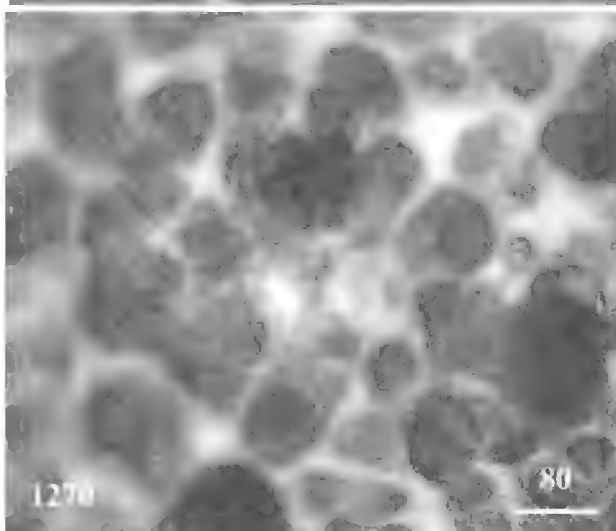
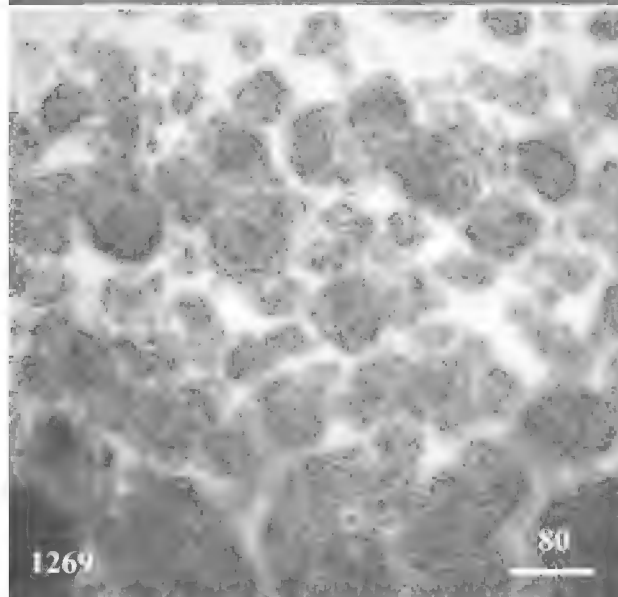
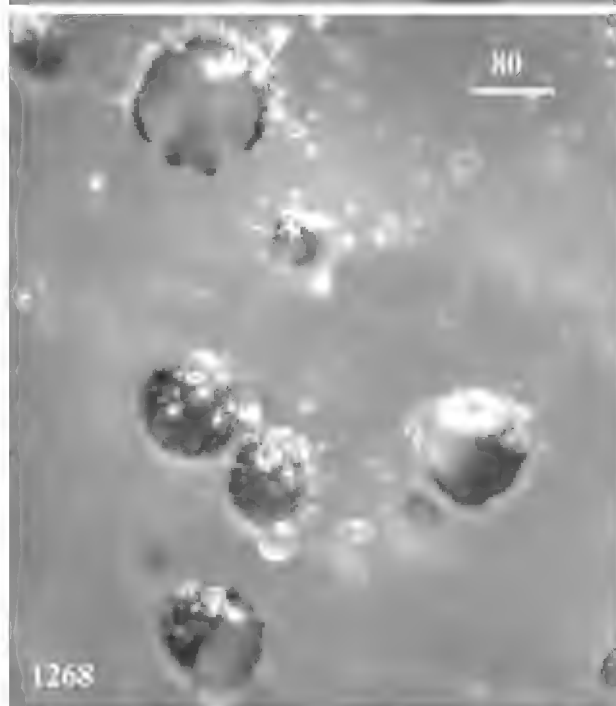
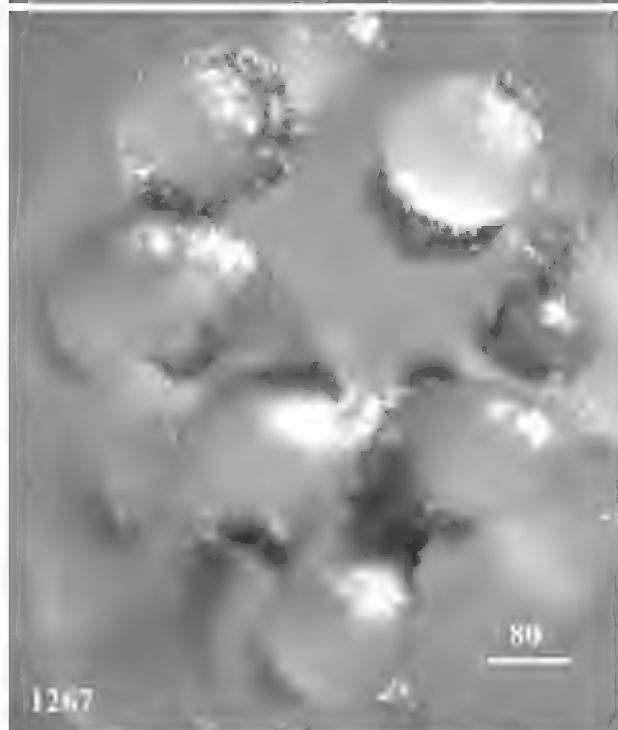
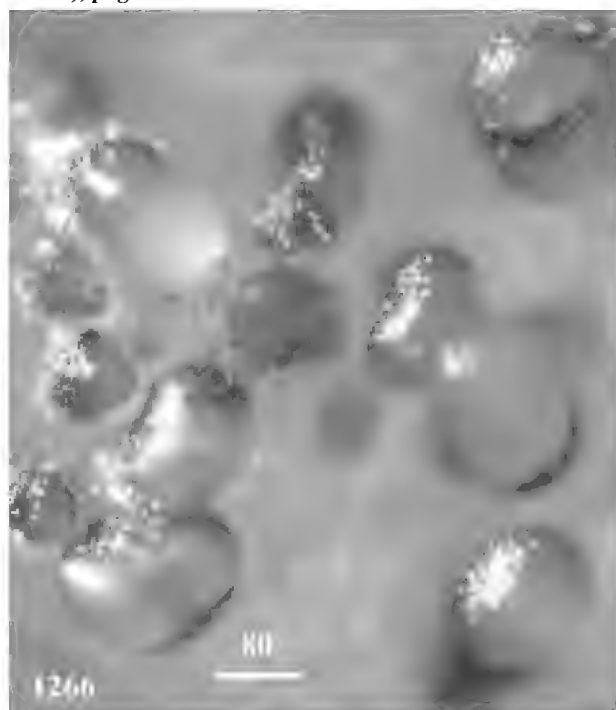
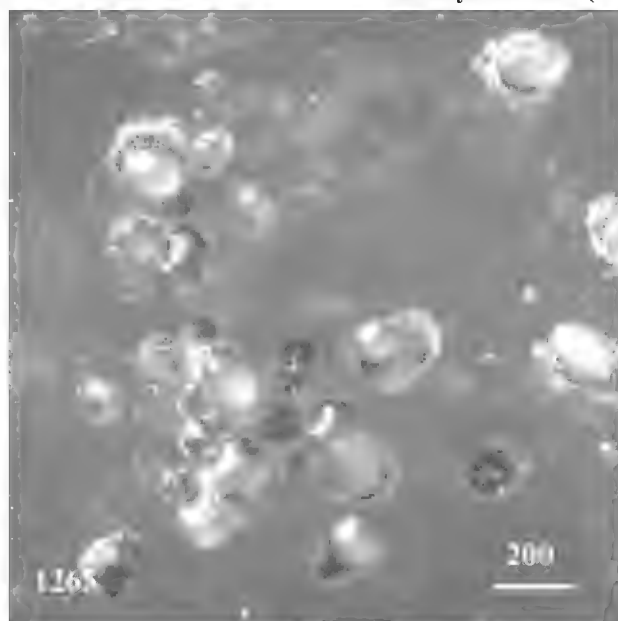
1271, 1272, 1273 = Ruptured conidiomata, from CMA.

1274, 1275 = Outer layer of peridium, showing textura intricata, seen from outside.

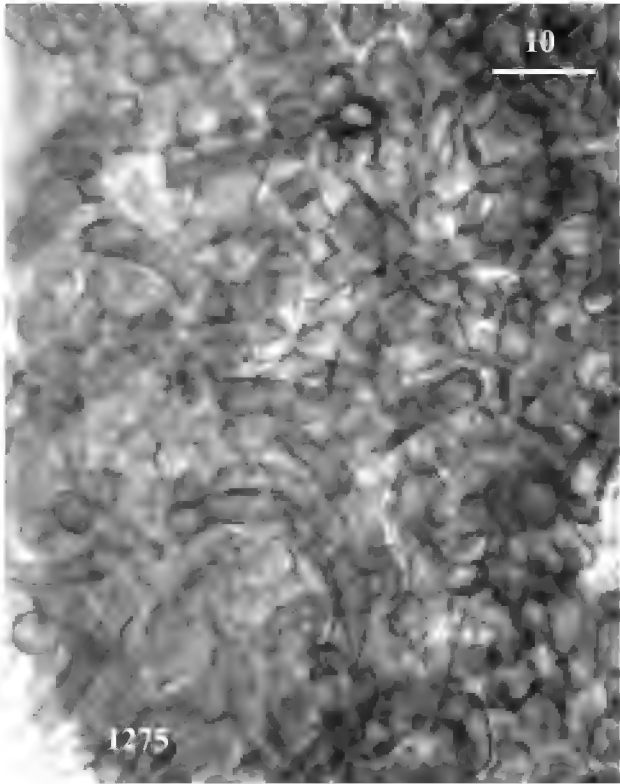
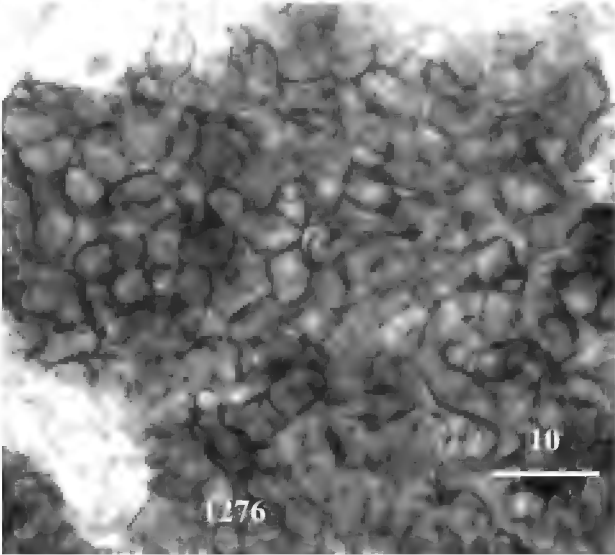
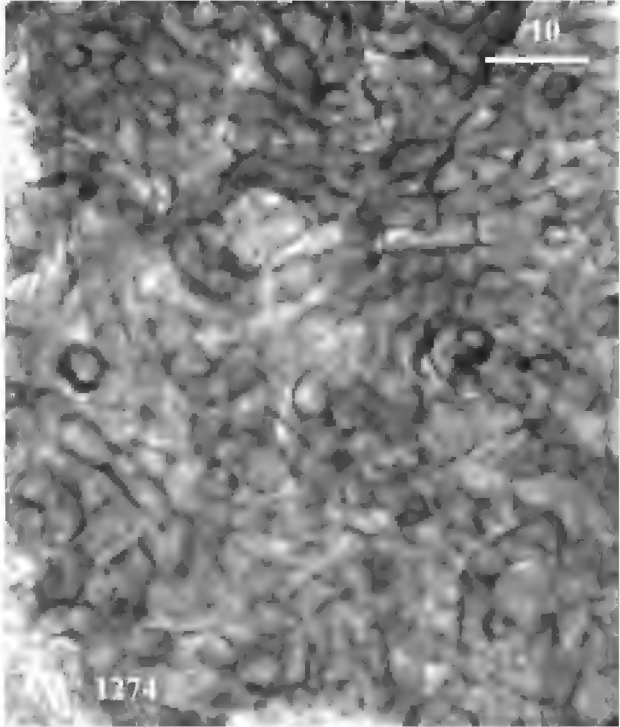
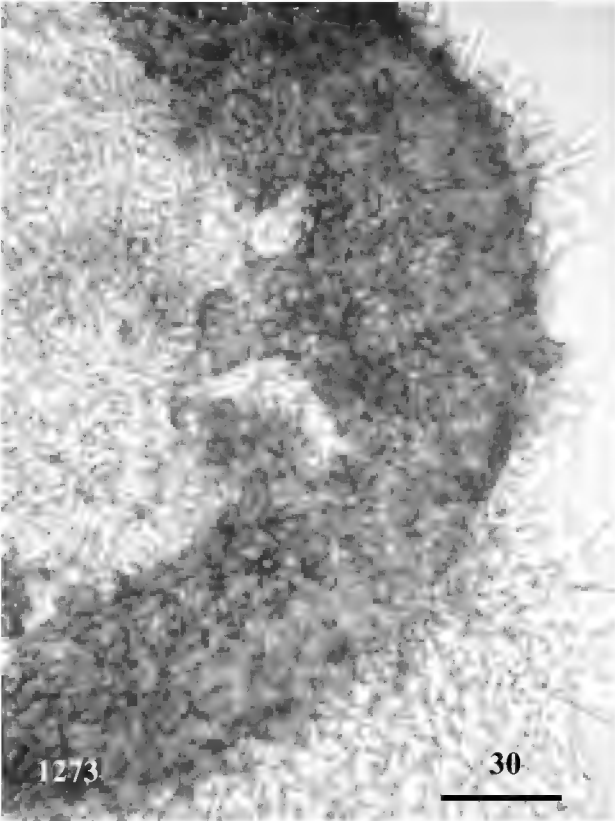
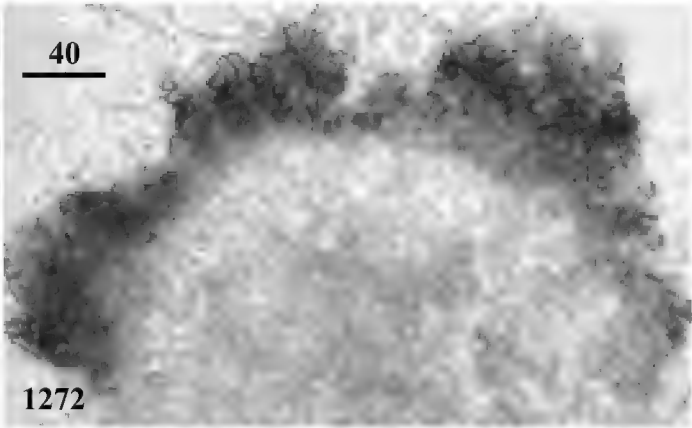
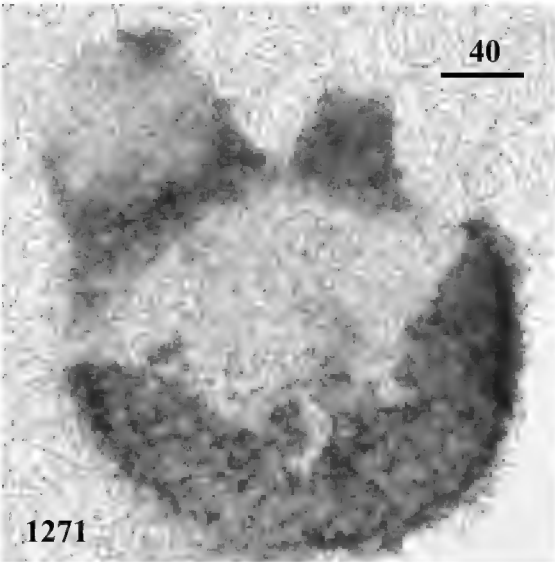
1276 = Inner layer of peridium, showing more or less textura angularis, seen from inside.

page 97

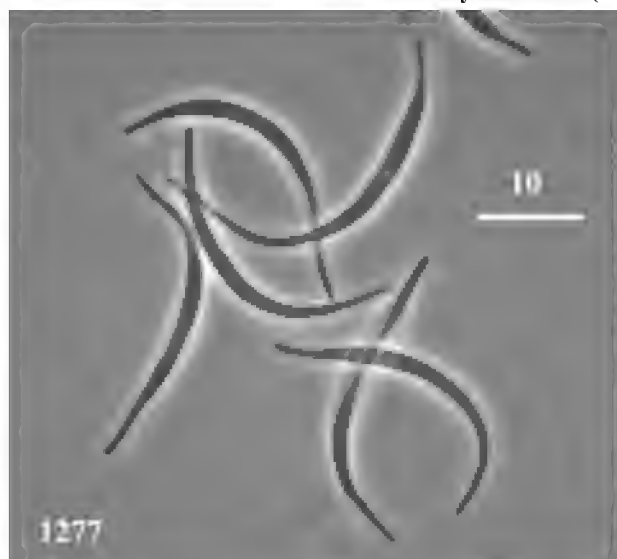
1277, 1278, 1279, 1280 = Conidia. ( by phase contrast )











**Basidioascus** gen. nov.

Ascomata sunt asci separati nudi. Asci initio sunt ramunculi laterales claviformes in hyphis vegetativis, post auto-fecundatio expansi, in ascos maturos transformati. Asci maturi obovati, frequenter e hyphis sustentibus disarticulati: tum totum contentum asci per 1-4 pedicellos cylindricos in ascosporas successive movens. Ascosporae globosae ad subglobosae, liberatae per rumpentes pedicellos, itaque basi vestigio pedicelli. Hyphae vegetativae frequenter ad septa disarticulatae et in arthrosporas transformatae, i. e. anamorphosis est *Geotrichum*. Cellulae gemmiferae deficientes ( " no yeast-like budding-cells " ). **Etym.:** *basidioascus* <= basidia like asci. Species typica postero sectione.

**1364 Basidioascus undulatus** sp. nov.

**Descr** Colonies in CMA effusae, tenuiter coactae, margine diffuso, ascis in tota superficie dense dispersis, initio albidae, postea pallide brunneae ad cinereo-rubrae ob ascosporas abundantes. Hyphae vegetativae ramosae, septatae, 1.5-4  $\mu$  latae, laeves, incoloratae, non characteristicae, frequenter ad septa disarticulatae et in arthrosporas transformatae ( = *Geotrichum*-anamorphosis ). Cellulae gemmiferae deficientes ( " no yeast-like budding cells " ). Ascomata sunt asci separati nudi. Asci initio ramunculi laterales claviformes, post auto-fecundatio, expansi, in ascos maturos transformati. Asci maturitate obovati, magnitudine variabiles, 13-26 x 6-13  $\mu$ , contento maxime guttulato, frequenter e hyphis sustentibus disarticulati: tum totum contentum asci in ascosporas successive movens per 1(-2) pedicellos cylindricos 2.5-12  $\mu$  longos 0.7-1.3  $\mu$  latos. Ascosporae maturitate juventute globosae ad subglobosae, contento maxime guttulato, cum pagina laevi, incoloratae; maturitate vetustate cum pagina undulata crassitunicata, per rumpentes pedicellos liberatae, itaque basi vestigio pedicelli, globosae ad subglobosae, 7.0-13  $\mu$  diam. vel 11-13 x 8-11  $\mu$ , modice brunneae. Post tres dies asci maturi formati; post sex dies ascosporae matura juvenes formatae. Ascosporae ubi perfecte matura non germinantes in medio communibus ( " perfectly mature ascospores not germinating on ordinary culture media " ).

Anamorphosis est *Geotrichum*. Post tres dies arthrosporis vidi.

In prima cultura ascus unusquisque productus 2-4 maturis ascosporis, post successivas transplantationes ascus unusquisque tantum una matura ascospora et frequenter 0-3 abortivis ascosporis productus. Hyphae vegetativae raro gerentes fibulas ( vel fibuloidia ), quae interruptae formaturae ascorum erunt. **Etym.:** *undulatus* <= mature ascospores with "wavy" wall.

**Hab** E solo; Cape Tribulation National Park, Qd, Australia; May 1988. **Typus:** cultura CMA exsiccata, MFC-21004.

**Mem** The present species has some similarity to *Galactomyces reessii* ( van der Walt ) Redhead & Malloch (1977), Canad. J. Bot. **55**: 1708. / == *Endomyces reessii* van der Walt (1959), Ant. van Leeuwenh. **25**: 463.

**Photo**

page 99

1281, 1282, 1283, 1284, 1285, 1286, 1287, 1288, 1289 = Development of asci on CMA. ( by phase contrast )

page 100

1290, 1291, 1292, 1293 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301 = Development of asci. ( by phase contrast )

page 101

1302, 1303, 1304, 1305, 1306, 1307, 1308 = Development of asci. ( by phase contrast )

1309, 1310, 1311, 1312 = Asci forming ascospores. ( by phase contrast )

1313, 1314 = Mature ascospores from asci, asci now empty. ( by phase contrast )

page 102

1315, 1316, 1317, 1318, 1319, 1320, 1321, 1322, 1323, 1324, 1325 = Ascospore formation from asci.

Endogenous nature ( double walled ) of ascospores seen. Asci now empty. ( by phase contrast )

page 103

1326, 1327, 1328, 1329, 1330, 1331, 1332 = Asci forming one mature ascospore and 1-3 aborted ones. ( by phase contrast )

1333 = An ascus produced two but small ascospores. ( by phase contrast )

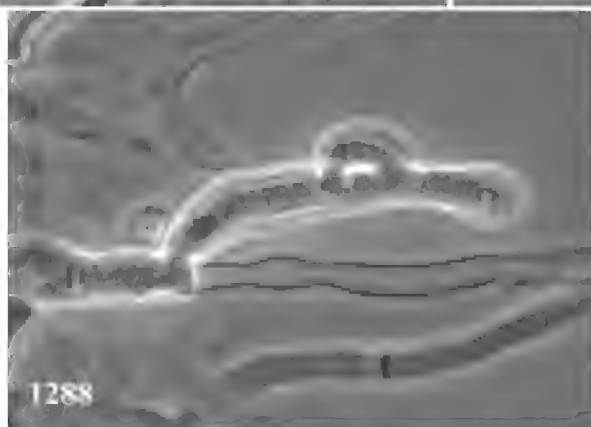
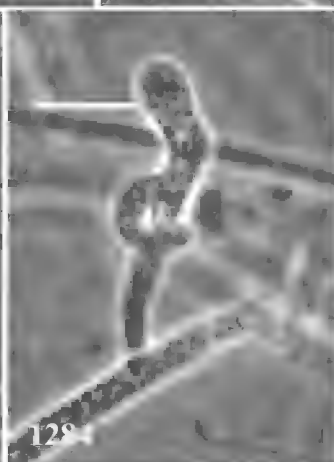
1334, 1335, 1336 = Fully mature ascospores.

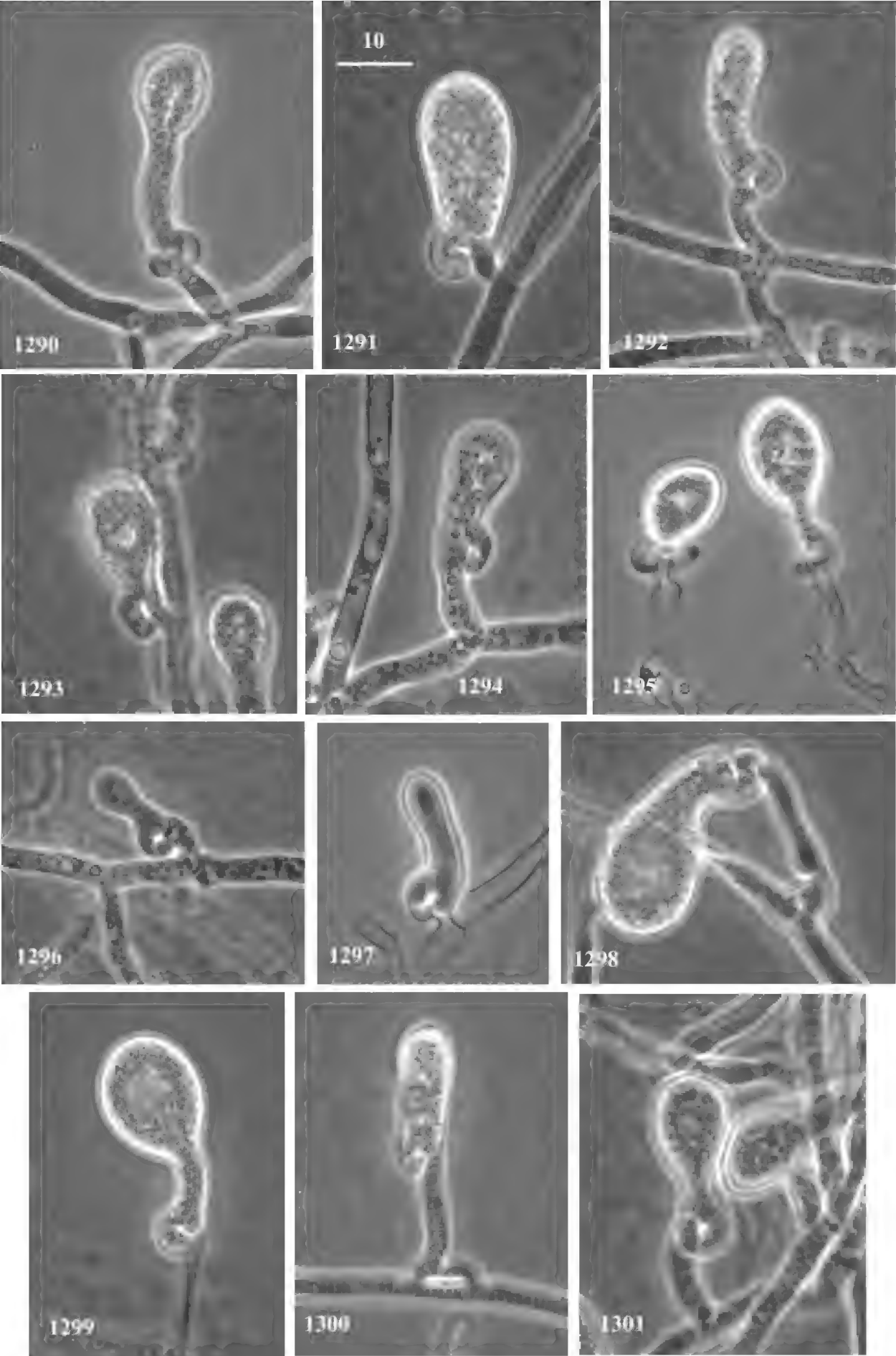
page 104

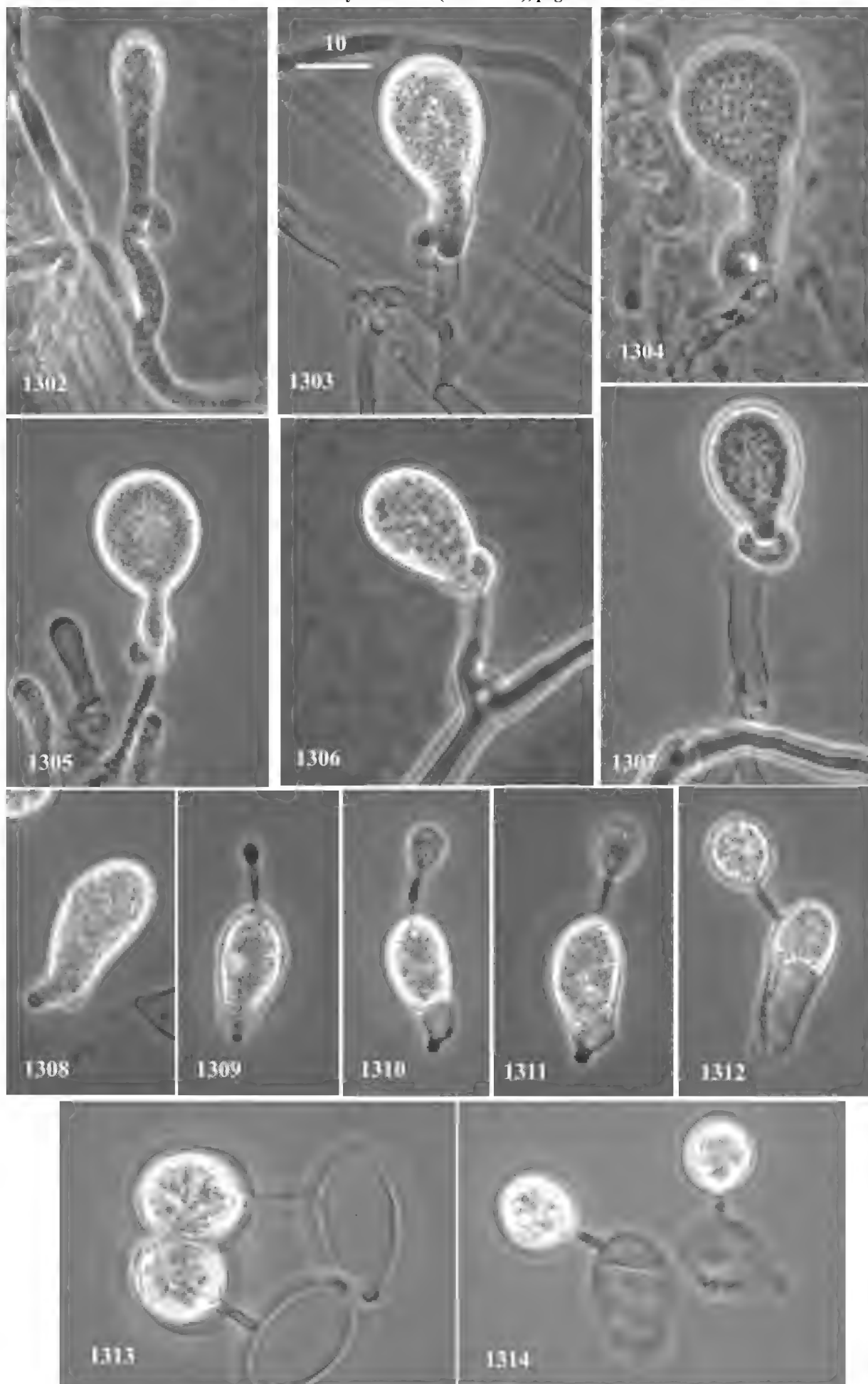
1337, 1338, 1339, 1340, 1341 = "*Geotrichum*" state, on CMA. ( by phase contrast )

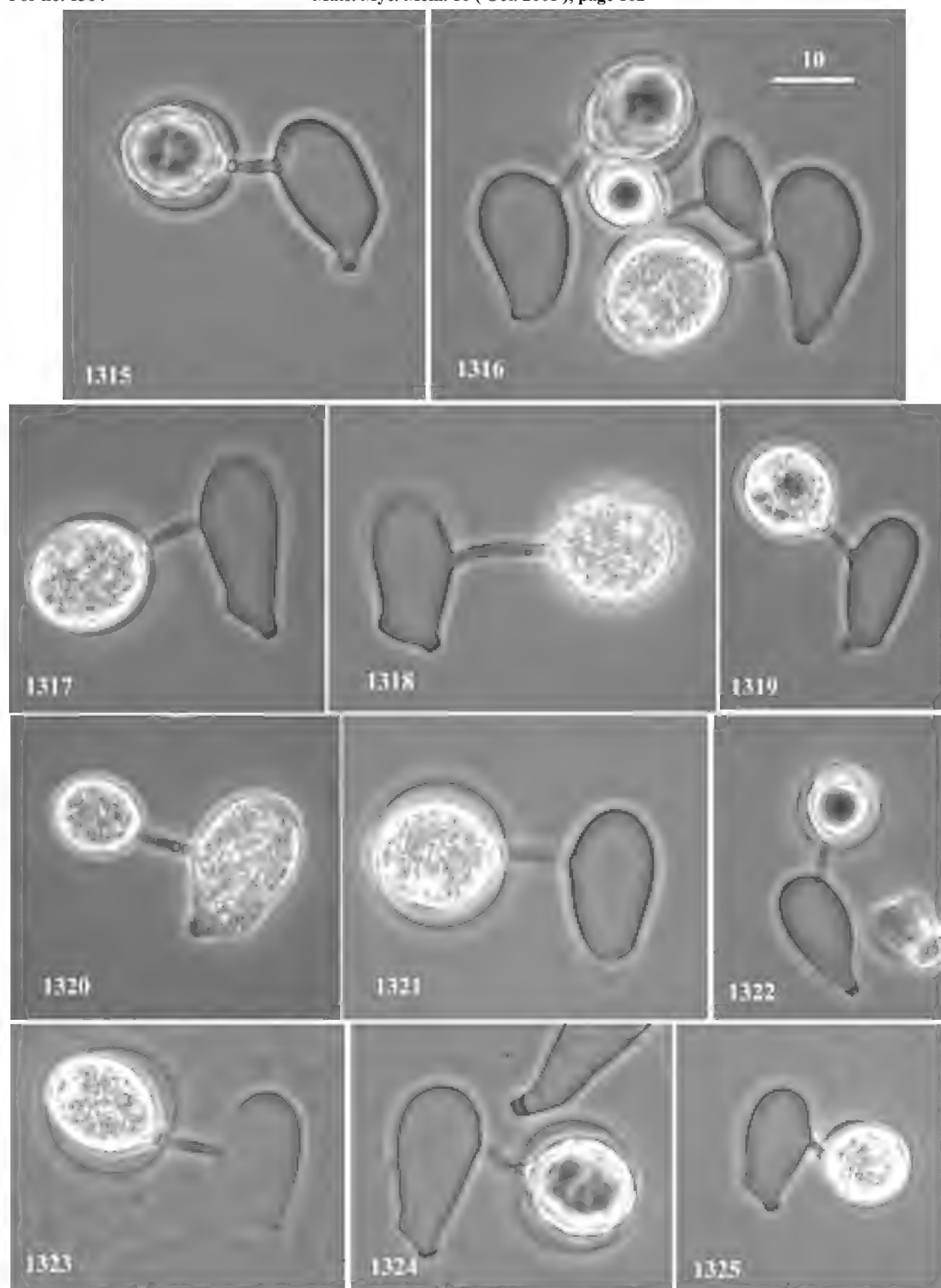
1342, 1343 = Hyphae with clamp connections, occasionally seen on water agar. ( by phase contrast )

Continue to page 102.





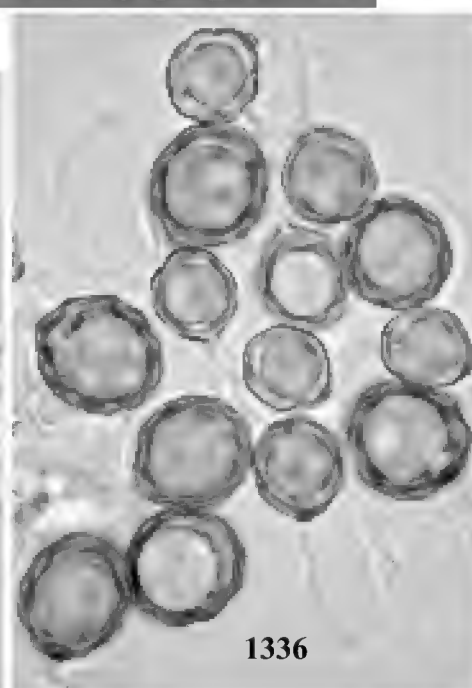
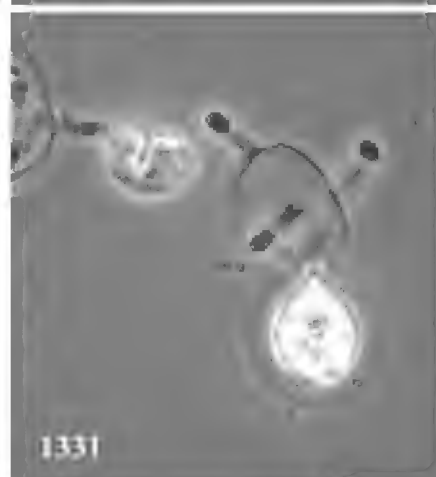
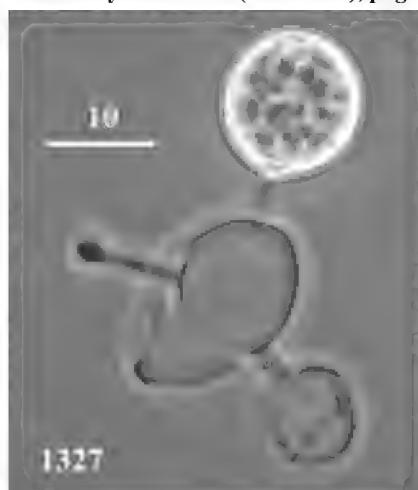
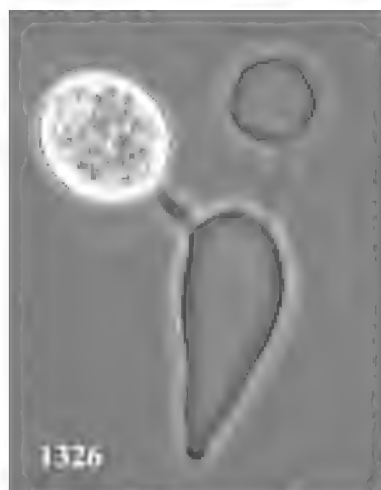


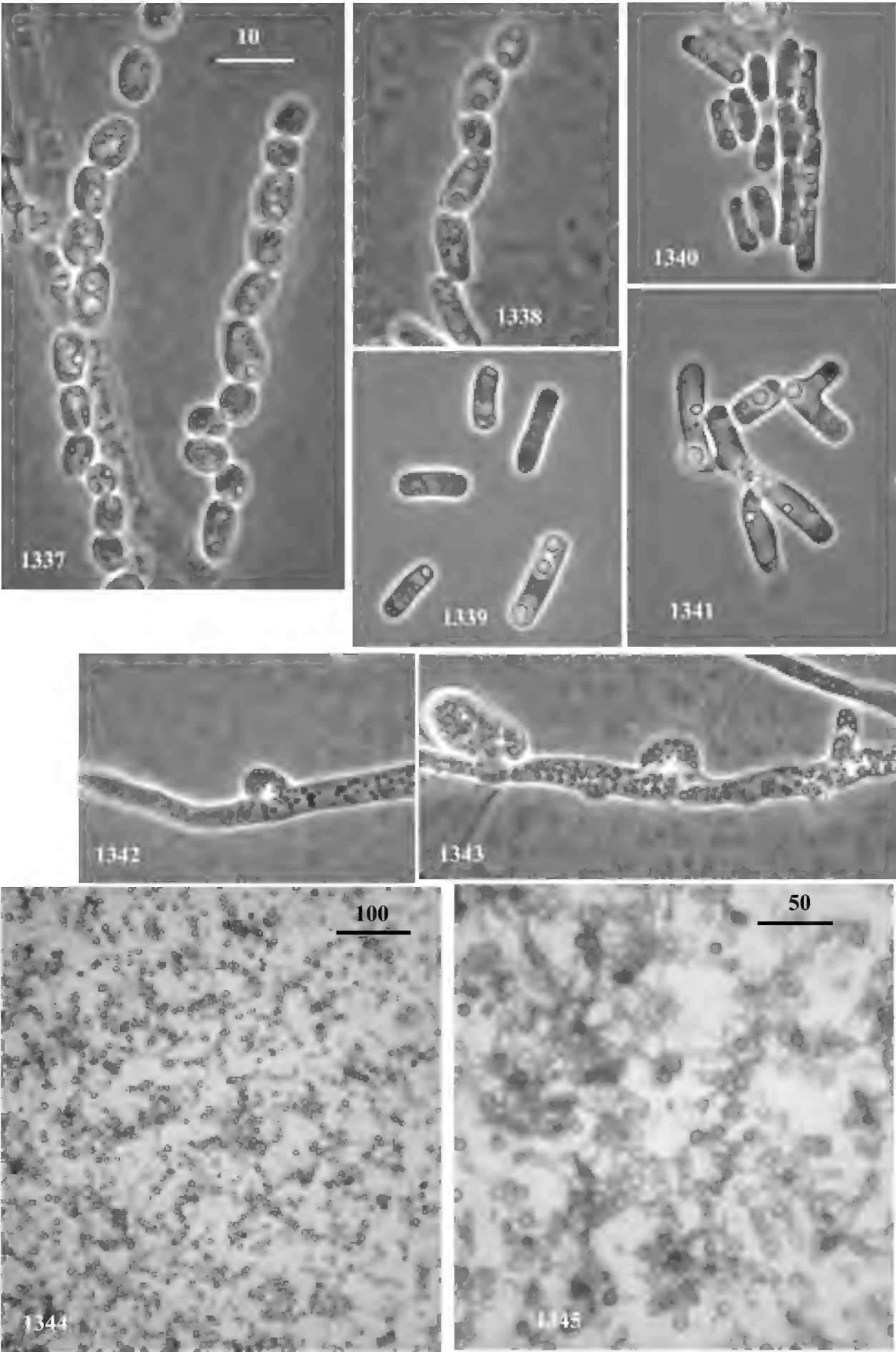


1344, 1345 = Colonies on CMA, after two weeks, showing mature ascospores as brownish globose bodies.  
page 214 ( color plate )

1825, 1826 = Colonies on CMA, after two weeks, showing mature ascospores as brownish globose bodies.







**1365 *Endomyces angularis* sp. nov.**

**Descr** Coloniae in CMA tarde crescentes, tenuiter coactae, albae postremo pallide brunneascentes, margine definito. Hyphae vegetativae sunt hyphae genuinae, i.e. cellulae fermenti desunt ("no yeast cells"), ramosae, septatae, ad septa non constrictae, 2-3  $\mu$  latae, hyalinae, laeves, in arthrosporas non transformatae ( i.e. statu *Geotrichi* abest ). Ascomata desunt. Asci nudi, solitarii separati, e tumoribus unilateralibus in hyphis vegetativis vel e tumoribus terminalibus globoideis in hyphis vegetativis evoluti, maturitate globosi ad subglobosi, in hyphis vegetativis laterales sessiles vel terminales, 7-10  $\mu$  in diam., 2 usque ad 7 spori, maturitate satis persistentes. Ascospores in forma variabiles, praecipue irregulariter angulares, interdum petasiformes, 5-7 x 3-5  $\mu$ , pallide brunneae. Anamorphosis deest.

**Etym.:** *angularis* <= conidia "angular" in outline.

**Hab** E solo sylvae; Okayama Forest Park, Okutsu-cho, Okayama Pref., Japan; Aug. 1999. **Typus:** cultura CMA exsiccata, MFC-21061.

**Ref** A. Guilliermond (1907), Ann. Mycol. **5**: 49-69. => p. 59, Fig. 11: an illustration of *Endomyces decipiens*. // J. A. von Arx (1972), Ant. van Leeuwenh. **38**: 289-309. On *Endomyces*, *Endomycopsis* and related yeast-like fungi. // J. A. von Arx (1977). Ant. van Leeuwenh. **43**: 333-340. => *Endomyces* Rees is restricted to only *Endomyces decipiens* Rees ( type sp., now monotypic ), characterized by asci formed directly on hyphae and hat-shaped ascospores. Others are transferred to *Dipodascus*. // S. A. Redhead & D. W. Malloch (1977), Canad. J. Bot. **55**: 1701-1711. => p. 1704: A description of *Endomyces decipiens* Rees, from the Rehm: Ascomyceten no.1050 *Endomyces decipiens* on *Agaricus melleus* deposited in the Cryptogamaic Herbarium, Univ. Toronto. // J. A. von Arx & D. Yarrow (1984), Ant. van Leeuwenh. **50**: 799-805. => a illustration of *Endomyces decipeens* in p. 801.

**Photo**

page 106

1346 = A mature colony on CMA, two weeks old.

1347 = Young asci from b/c-medium.

1348, 1349, 1350, 1351, 1352 = Mature asci, on b/c-medium.

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1353 = Mature asci, on b/c-medium.

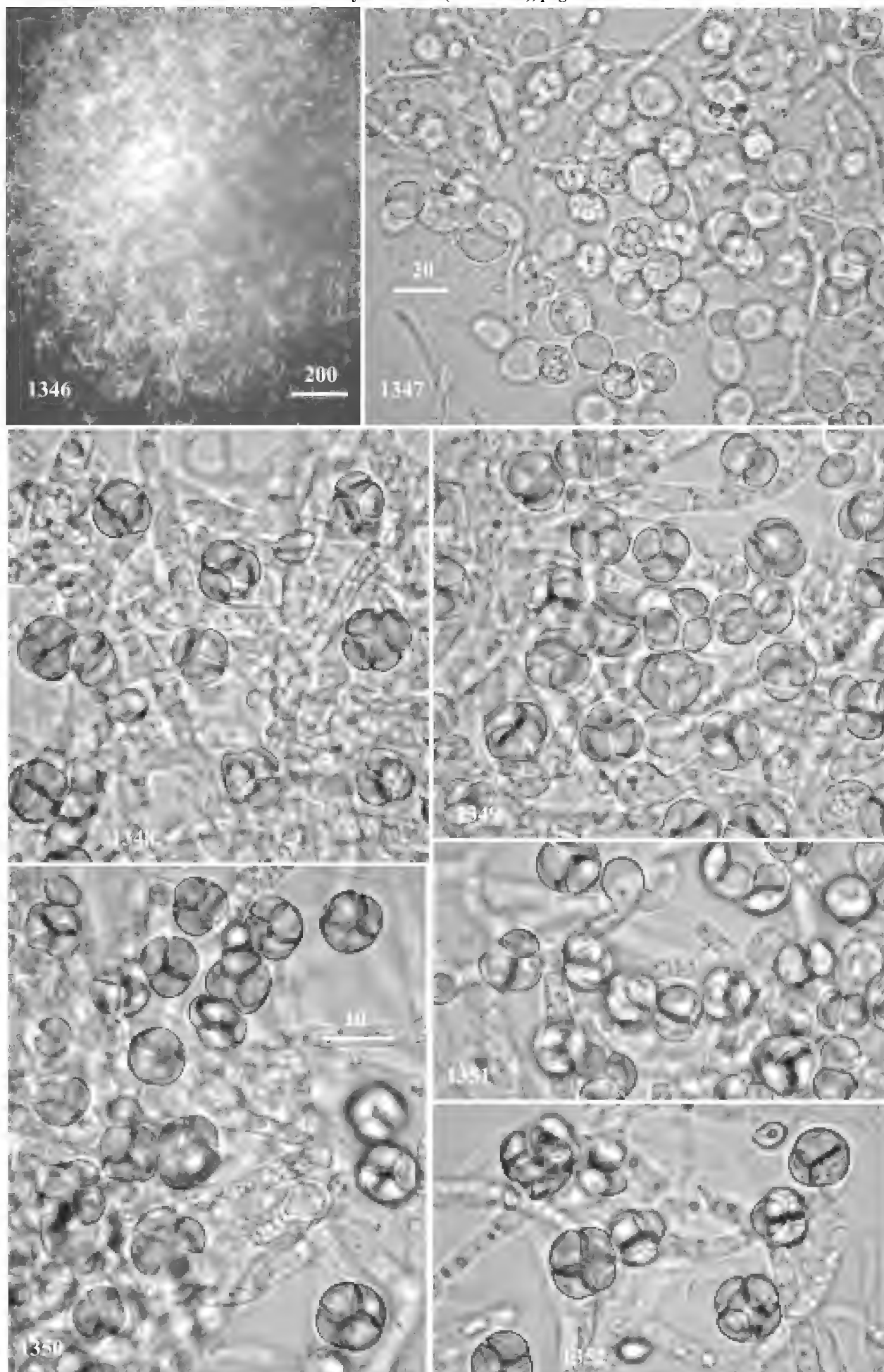
1354, 1355, 1356 = Ascospores from squashed mature asci. ( 1356 by phase contrast )

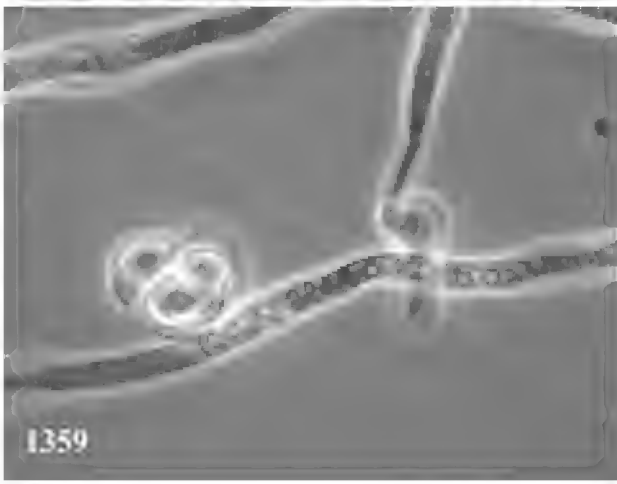
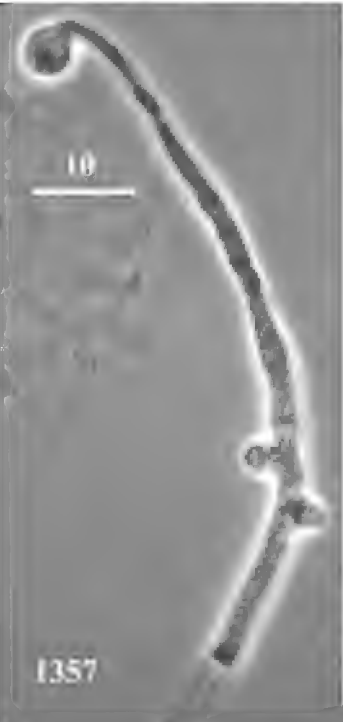
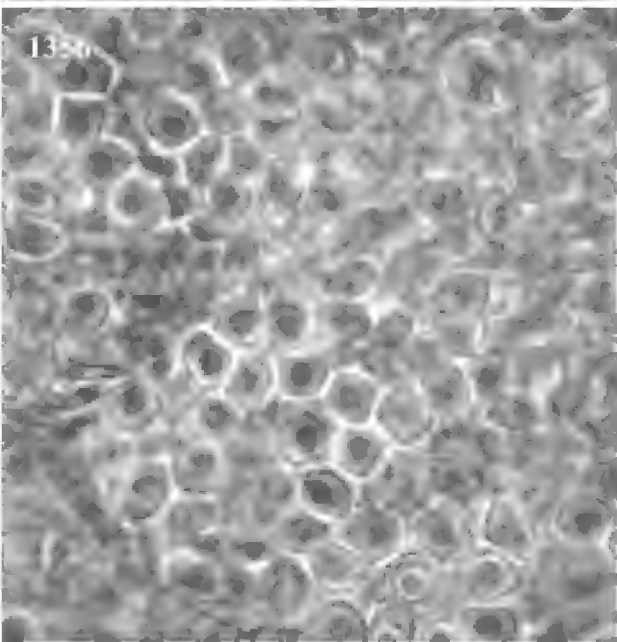
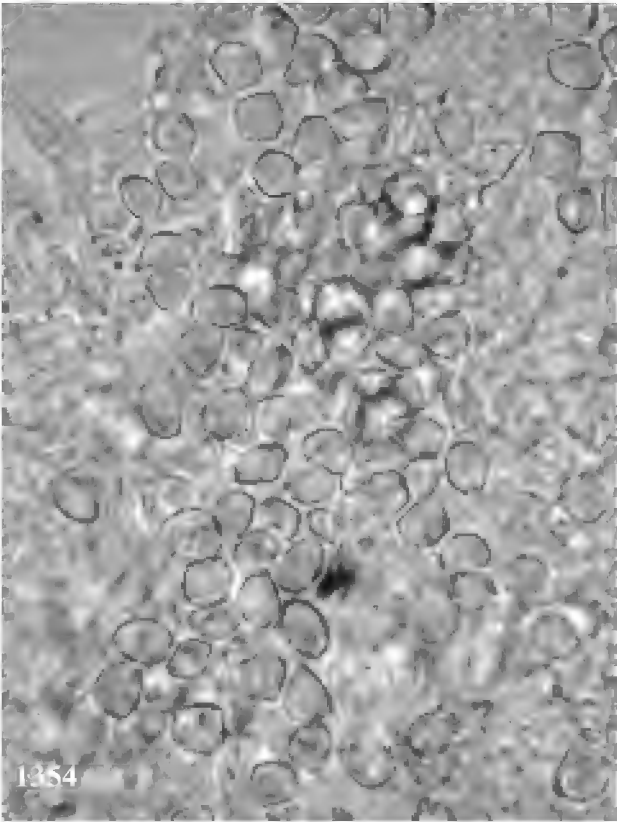
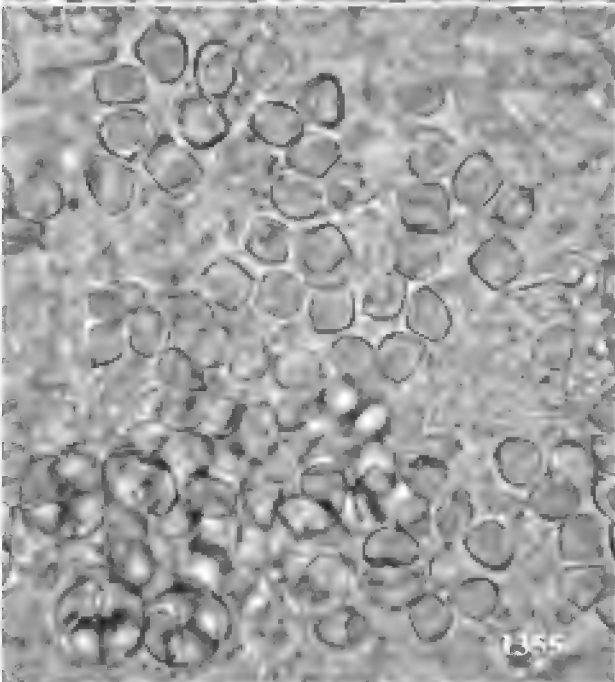
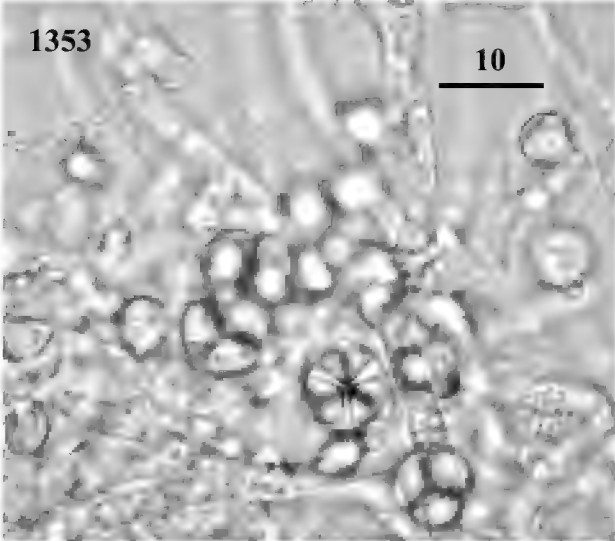
1357, 1358, 1359 = Developing asci. ( by phase contrast )

page 108

1360, 1361, 1362, 1363, 1364, 1365, 1366, 1367 1368, 1369, 1370, 1371 = Developing asci.

( by phase contrast except 1370, 1371 )









**1366** *Byssochlamys fulva* Ollivier & G. Smith, J. Bot., London **72**: 197. 1933.

Anamorphosis: *Paecilomyces fulvus* Stolk & Samson (1971), Persoonia **6**: 354.

**Descr** Coloniae in CMA cito diffusae, laxae coactae, albae, maturitate pallide brunneascentes ob massam conidiorum. Ascomata sunt asci aggregati, superficialia, dispersa, ambitu plusminusve globosa margine indefinita, ochracea, laxis telis hypharum vegetativarum circumcincta, margine frequenter *Paecilomyces*-anamorphosem ferentia. Asci facile separabiles, inter sese non conglutinati, globosi, 11-13  $\mu$  diam., octospori, maturitate deliquescentes. Ascosporae ellipsoideae, 5.5-7 x 4-4.5  $\mu$ , crassitunicatae, hyalinae. Anamorphosis est *Paecilomyces fulvus*, qui super omnem coloniam dense dispersus. Conidia unicellularia, catenas longas plusminusve persistentes disposita, eadem primo formata obovata, eadem sequenta doliiformia ad subcylindrica, 3-10 x 1.5-4  $\mu$ , laevia, hyalina, pallide brunnea sicca in massa.

**Hab** MFC-21071. E solo; Pucon, Chile; April 18, 1978.

**Ref** A. H. S. Brown & G. Smith (1957), Trans. Br. mycol. Soc. **40**: 17-89. => p. 37. *Byssochlamys fulva*: ascospores 5.5-7 x 3.5-4.5  $\mu$ , fere 6.5  $\mu$  long. // C. Ram (1968), Nova Hedw. **16**: 305-314 + Pl. 103-105. => in p. 309, a comparison table of *B. nivea* var. *nivea*, *B. nivea* var. *lagunculariae*, *B. fulva*, and *B. zollerniae*. / *B. fulva*: ascospores 5.5-7 ( mostly 6.5 ) x 3.5-4.5  $\mu$ , conidia 4-9 x 1.5-3  $\mu$ . // Stolk & Samson (1971), Persoonia **6**: 341-357.

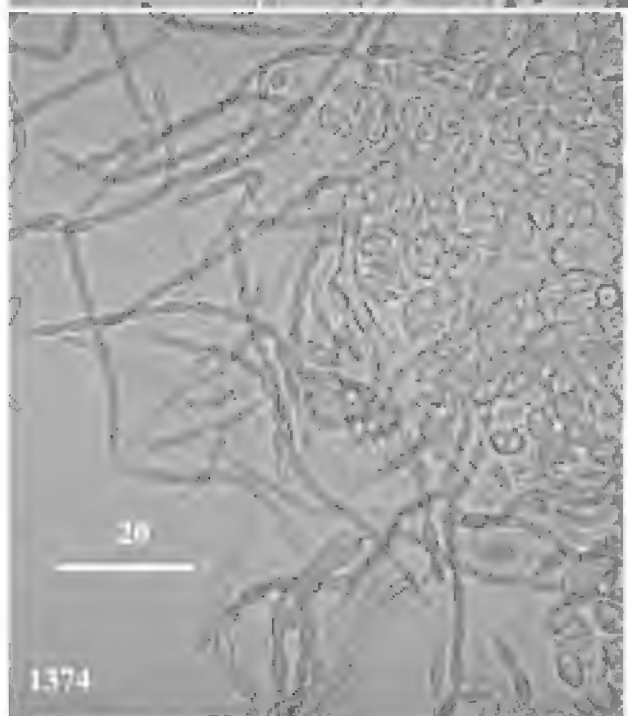
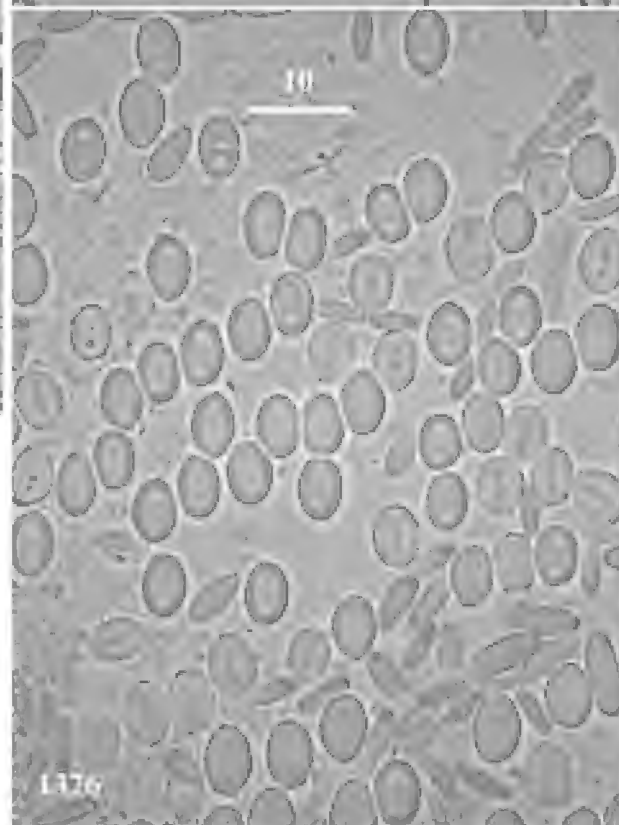
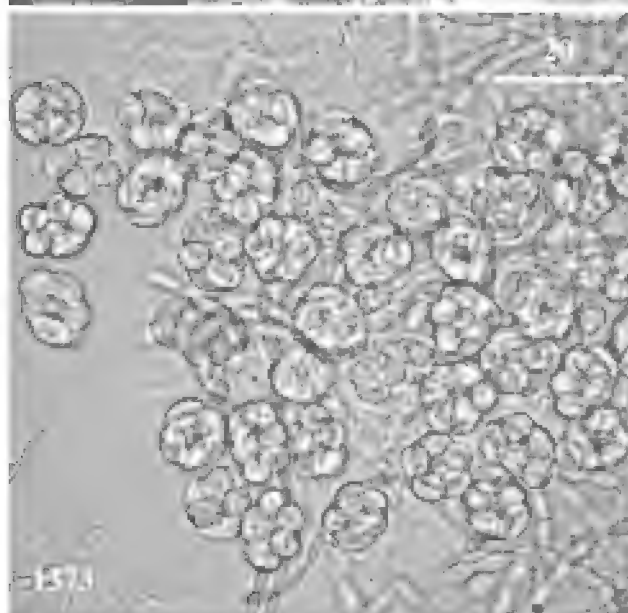
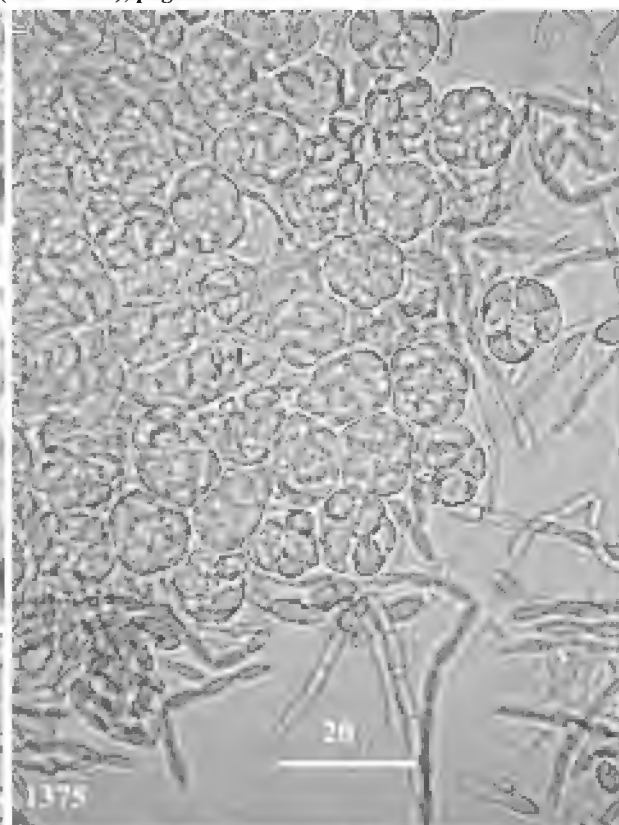
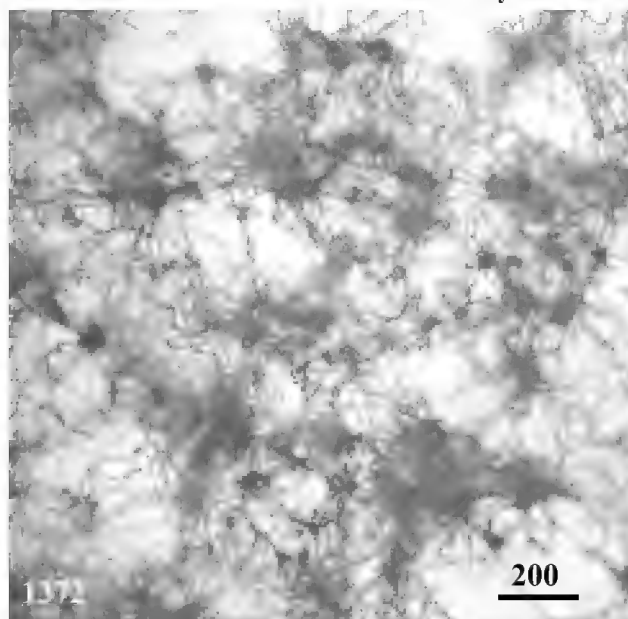
**Photo**

page 110

1372 = Habit on CMA, showing ascomata and conidial chains of *Paecilomyces* state.

1373, 1374, 1375 = Conidiomata from CMA, gently pressed, asci and chains of *Paecilomyces* seen.

1376 = Ascospores, from squashed asci.



***Paratalaromyces* gen. nov.**

Hyphae vegetativae ramosae, septatae, non disarticulatae ad septa, hyalinae ad subhyalinae. Ascomata superficialia, sphaerica, non ostiolata, hyphis vegetativis usitatis oblecta. Peridium partibus duabus ( exclusum hyphis vegetativis usitatis oblectis ) compositum; pars exterior est macula, quae unistrata ex hyphis septatis luteolis verrucatis composita; pars interior est tenuiter membranacea textura epidermoidea hyalina vel subhyalina. Asci juventute irregulariter ramosi catenati, maturitate separati globosi ad subglobosi, omnem cavitatem ascomatis complentes, 4- vel 8-spori, maturitate deliquescentes. Ascosporae lenticulares, una appendice orbiculari praeditae, laeves, hyalinae, pallide coloratae in massa. Anamorphosis est *Penicillium*. Arthroconidia deficiente. **Etym.**: *Paratalaromyces* <= "similar to *Talaromyces*". Species typica postero sectione.

**1367 *Paratalaromyces lenticularis* sp. nov.**

**Descr** In b/c et CMA: Coloniae effusae, hyphis subfloccosis pallide luteis, ascomatibus luteis dense dispersis interdum in annulis concentricis. Hyphae vegetativae ramosae, septatae, non disarticulatae ad septa, 0.6-2.5  $\mu$  latae, laeves vel inconspicue asperae, hyalinae ad subhyalinae, in massa modice luteae. Ascomata superficialia, hyphis vegetativis usitatis pallide luteis dense oblecta, sphaerica 140-500  $\mu$  diam. ( exclusa hyphis oblectis ), aspectu persimilia *Talaromyces lutei*. Peridium ( exclusum hyphis intricatis usitatis pallide luteis ) partibus duabus compositum, ca 10  $\mu$  crassum; pars exterior est laxa macula, quae unistrata ex hyphis intricatis septatis 1-3.5  $\mu$  latis luteis conspicue verrucatis composita; pars interior est membranacea textura epidermoidea bistrata pallide luteola. Asci juventute ut massa irregulariter ramosa catenata in ascomate dispositi, maturitate separati globosi ad subglobosi, omnem cavitatem ascomatis complentes, 4-8-, praecipue 8-spori, isdem 8-sporis 7.5-8.5  $\mu$  in diam., isdem 4-sporis 5-6  $\mu$  in diam., maturitate deliquescentes. Ascosporae lenticulares, aspectu apicali ellipsoideae, 3.5-4.5 x 2.5-3  $\mu$ , aspectu laterali parce complanatae, ad paginae marginem complanatae una appendice orbiculari praeditae, laeves, hyalinae, sub lente pallide luteae in massa.

Anamorphosis est *Penicillium*, quod *Monoverticillata*-sectionem pertinet, sparsim formatum. Conidiophora cylindrica, simplicia, non vel parce septata, laevia, 15-25  $\mu$  longa 2-2.5  $\mu$  lata, apice 2-4 phialidibus in fasciculo praedita; phialides lanceolatae, 9-13 x 2-2.5  $\mu$ , prope apicem ad 0.5  $\mu$  angustatae, laeves hyalinae. Additamento stato *Penicillii* supra descripto, phialides solitariae in hyphis vegetativis disperse directae ( i.e. sine conidiophoris ) oriundae. Conidia ellipsoidea subglobosave, 2.5-5  $\mu$  diam. vel (2.5-)3.5-6(-7.5) x (2-)2.5-4.5  $\mu$ , catenata, inconspicue aspera, hyalina. Arthroconidia non observo. **Etym.**: *lenticularis* <= ascospores "lenticular".

**Hab** E solo; Taipei, Taiwan; June 1997. **Typus**: cultura b/c-medio exsiccata, MFC-21092.

**Mem** The present genus is similar to *Talaromyces* Benjamin (1955), the key characters of which are that the ascocarpic peridium is composed of interwoven hyphae, asci are initially produced in chains and with a *Penicillium*-anamorph. In the new genus the peridium has both specialized reticulate hyphal mesh and a definite textura epidermoidea wall. The new genus is differentiated from *Leucothecium* von Arx & Samson (1973), in which the ascomatal wall lacks peridial hyphal mesh and its anamorph is arthroconidial. *Azureothecium australiense* Matsushima ( in Mats. Myc. Mem. 6: p. 6, no. 579, 1989 ) has some similarity to the present new species in closed globose ascocarp, textura epidermoidea peridium, and 8-spored globoid asci. The present species is similar to *Talaromyces unicus* S. S. Tzean et al. ( Mycologia 84: p. 739-740.1992 ), which seems to be deviated from typical *Talaromyces* spp. especially in peridium structure.

**Ref** J. A. von Arx & R. A. Samson (1973), Persoonia 7: 377-380. => *Leucothecium emdenii* gen. et sp. nov. // J. A. von Arx (1987). Persoonia 13: 273-300. // M. Valldosera & J. Guarro & M. J. Figueras (1991). Mycol. Res. 95: 243-256. => *Leucothecium coprophilum* Valldosera & Guarro, sp. nov. ( 2nd species ).

**Photo**

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1377, 1378 = Habit, ascomata on CMA, showing ascomata covered with common vegetative hyphae.

1379, 1380 = Ascomata gently squashed.

1381 = Peridium seen from outside, showing reticulum of verrucose hyphae.

1382 = Reticulate verrucose hyphae, from squashed ascoma.

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1383 = Peridium seen from outside, at the edge of ascoma, showing reticulate verrucose hyphae.

1384 = Reticulate verrucose hyphae, from squashed ascoma.

1385 = Peridium seen from inside, through thin *textura epidermoidea* reticulate verrucose hyphae are seen.

1386 = Peridium, *textura epidermoidea*, from squashed ascoma.

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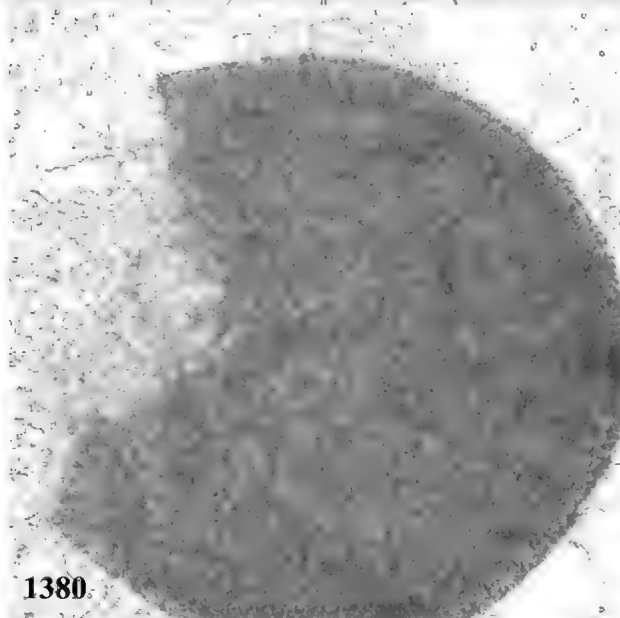
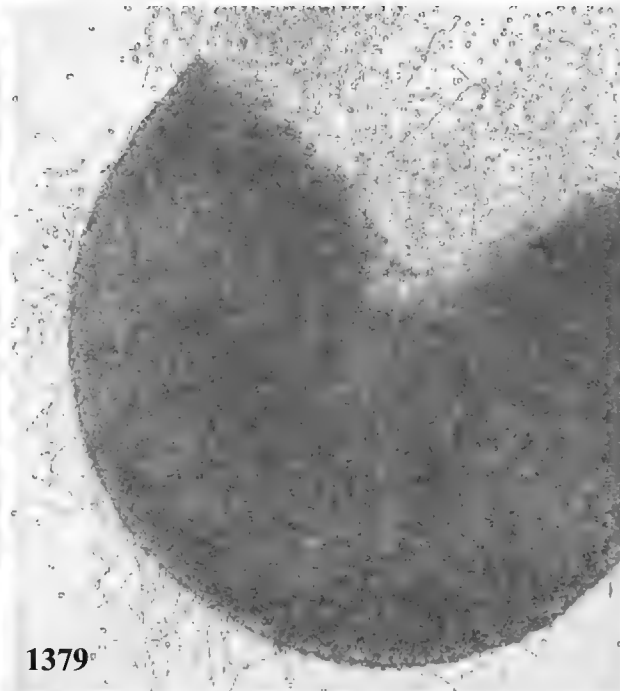
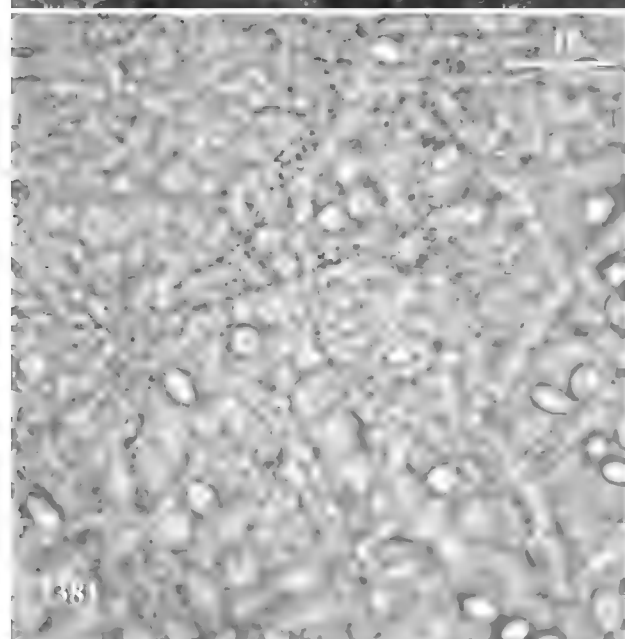
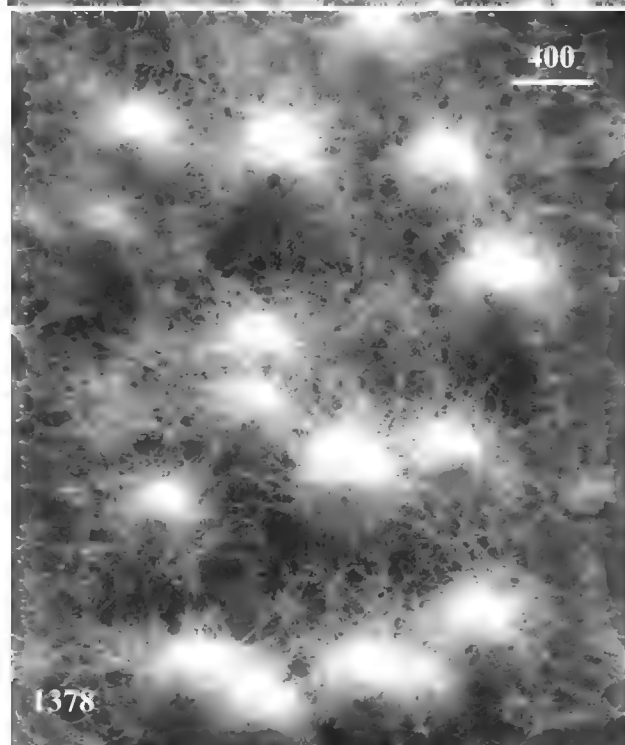
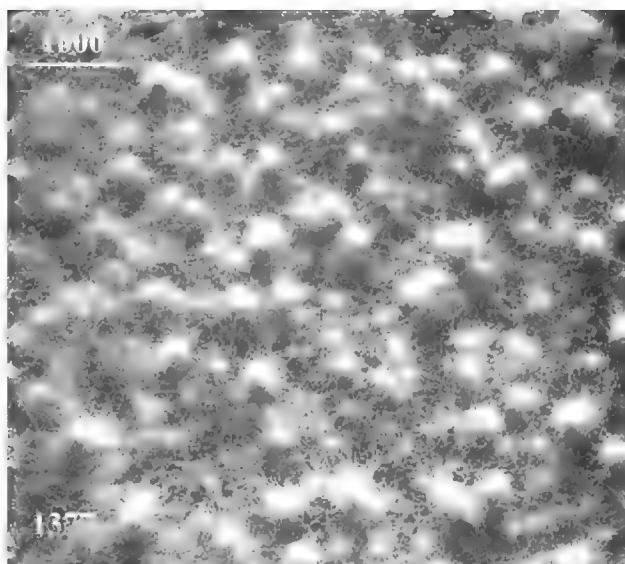
1387, 1388, 1389, 1390, 1391, 1392, 1393 = Young asci, from squashed ascomata of 10 days  
on b/c medium ( by phase contrast ).

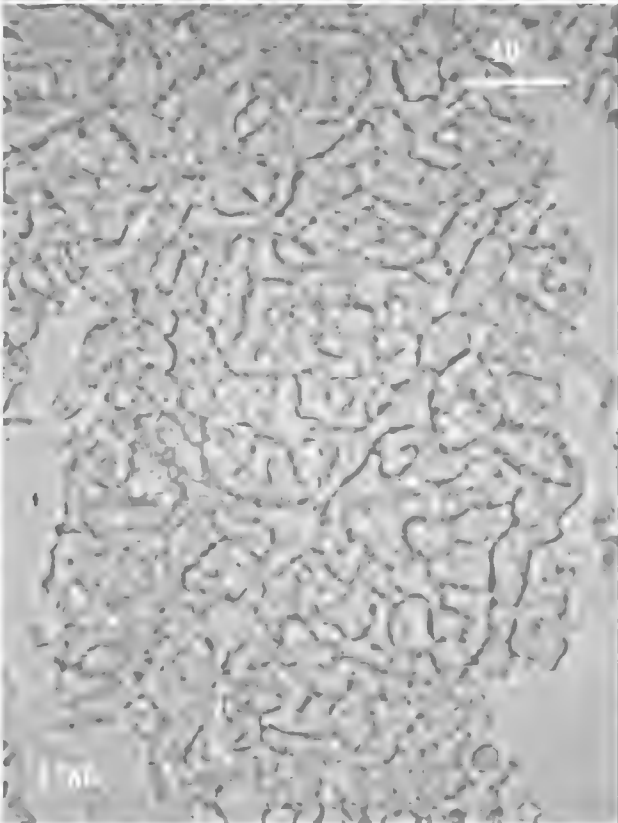
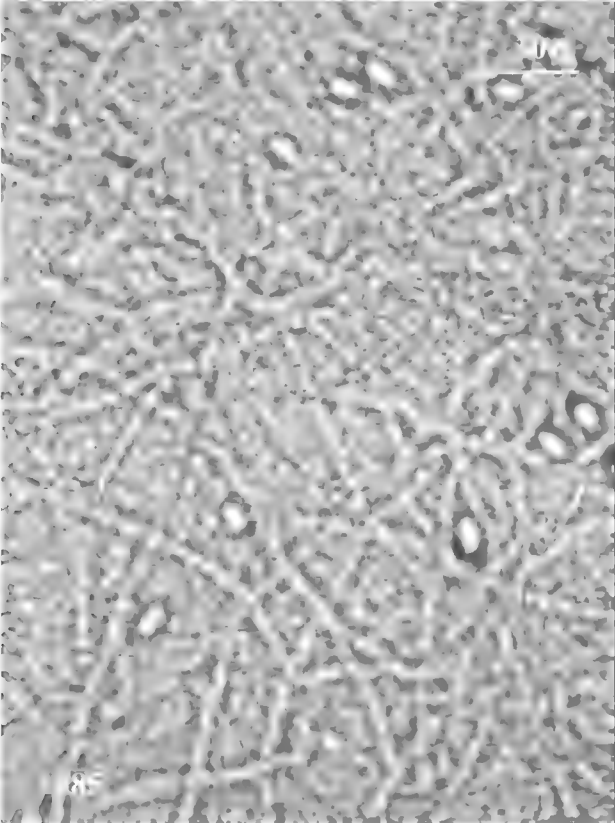
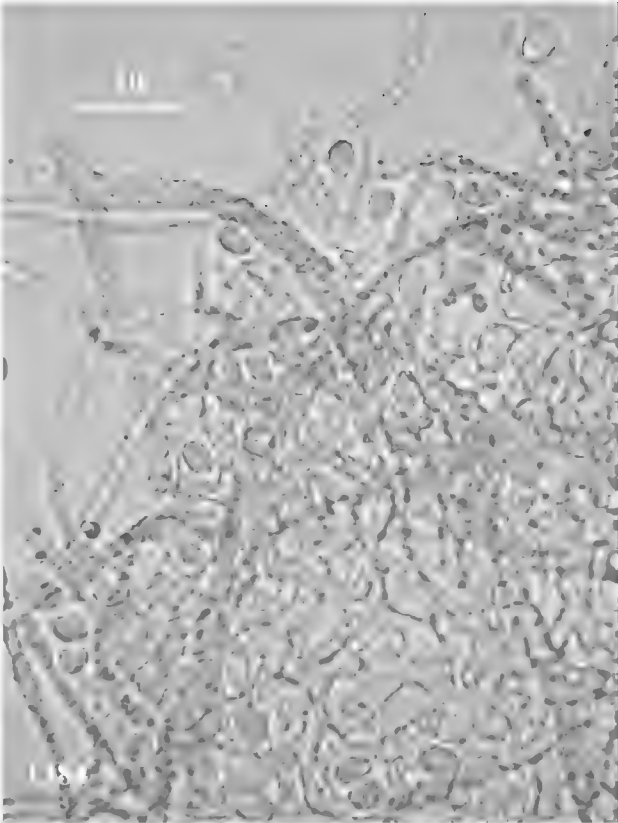
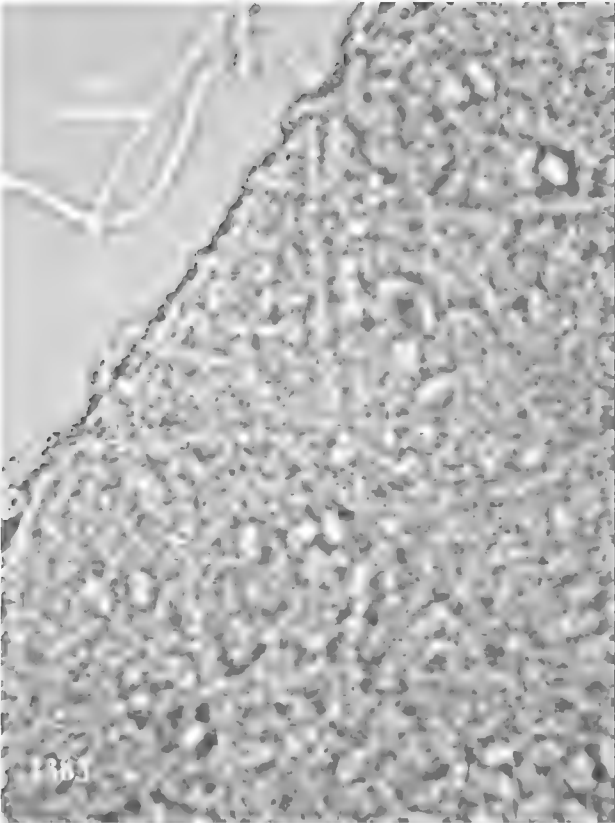
1394, 1395, 1396 = Ascospores.

page 209 ( color plate )

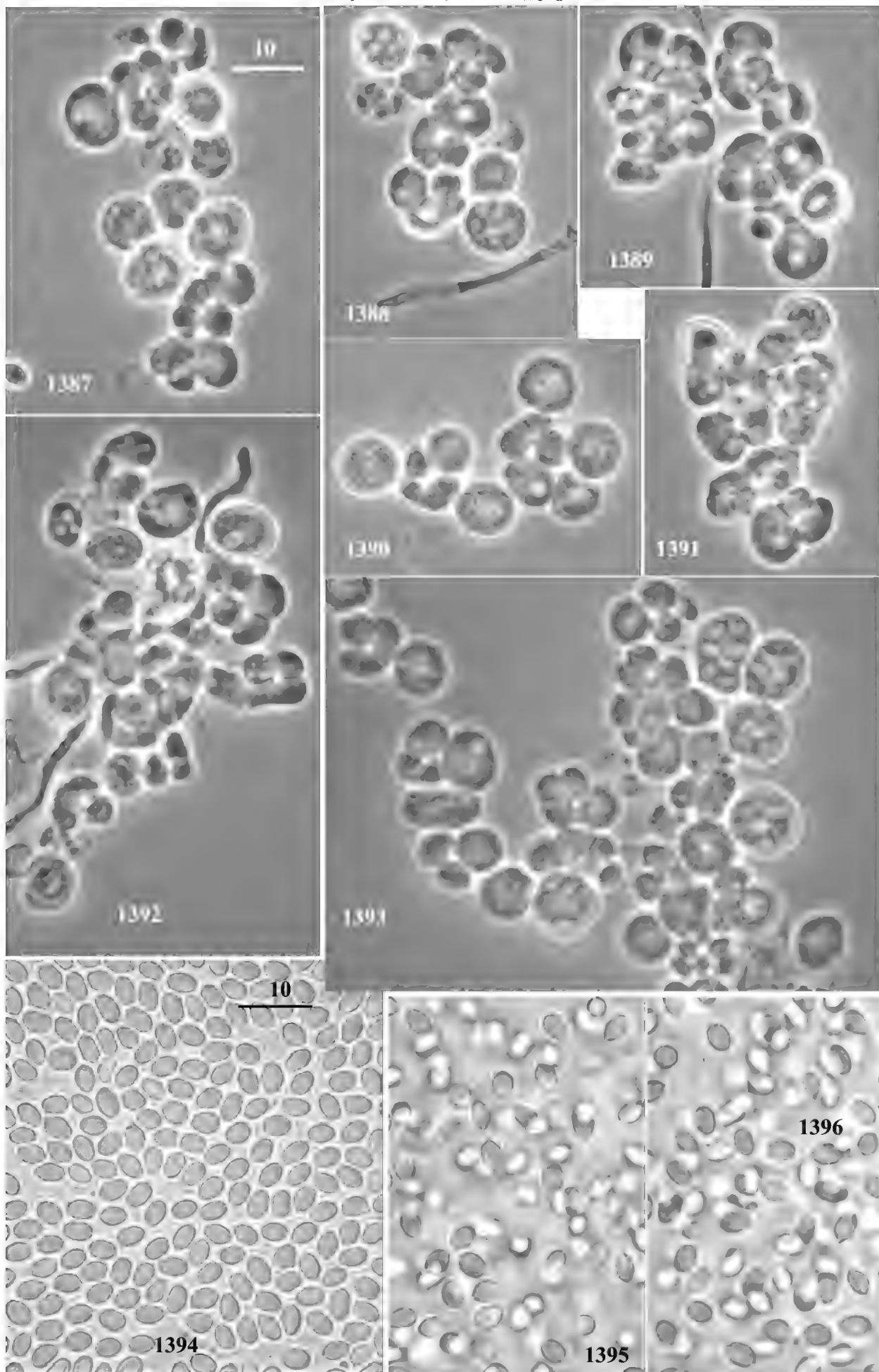
1800 = Habit, ascomata on CMA, ascomata covered with yellowish vegetative hyphae.

1801 = Ascoma gently squashed..









**1368 *Microascus cinereus*** ( Emile-Weil et Gaudin ) Curzi (1931), Boll. Staz. Patol. veg. Roma, N. S. **11**: 60.

Anamorphosis: *Scopulariopsis cinerea* Emile-Weil & Gaudin (1919), Archs. Med. exp. Anat. path. Paris **28**: 452.

**Descr** Coloniae in CMA modice crescentes, laxe tenuiter coactae, albae, ascomatibus dense dispersis ad gregariis, oculo nudo velut punctutis ateris, margine diffusae. Ascomata superficialia ad sub-superficialia, globosa, 100-400  $\mu$  diam, rostro parvo, atera; parietes externe visi textura angulari, fusci. Asci initio lineate radiate catenati, juventute oblongi ad obovoidei, maturitate separati, globosi ad subglobosi, octospori, raro tetraspori, postea deliquescentes. Ascosporae reniformes, 4.2-5.5 x 2.5-3.0  $\mu$ , laeves, pallide brunneae, brunneae in massa, unaquaeque poro germinali inconspicuo ad extremum praedita. Anamorphosis est *Scopulariopsis*, quae pauper, inconspicua, non characteristic; conidiophora destituta vel raro formata; cellulae conidiogenae cylindricae lageniformes cylindro-clavatae, 8-13 x 2.5-3.5  $\mu$ , laeves, hyalinae, apice collo cylindrico angusto annellato 1.5-2  $\mu$  lato. Conidia forma magnitudineque variabilia, ellipsoideae oblongae, 4.5-7.5 x 2-3.5(-5)  $\mu$ , basi truncata 1.3-1.8  $\mu$  lata, laevia, hyalina.

**Hab** MFC-21033. E solo sylvae; Wakasugi Forest, Okayama Pref., Japan; April, 1999.

**Mem** In fungi described as *Microascus cinereus*, the size of spores are variable by authors: Barron (1961) => ascospores 5-6.5 x 3-4  $\mu$ , conidia 3.5-5 x 3-4  $\mu$  / Udagawa (1962) => ascospores 4.5-5.5 x 2.5-3  $\mu$ , conidia 3-4.5 x 2.5-3  $\mu$ . / von Arx (1975) => ascospores 5-7 x 2.5-4  $\mu$ , conidia 3.5-5 x 2-3  $\mu$ . / M. J. Figueras & J. Guarro (1988), Beih. Nova Hedw. **94**: 38-39. => ascospores 5-6.5 x 3-4  $\mu$ , conidia 3.5-5 x 3-4  $\mu$ .

**Photo**

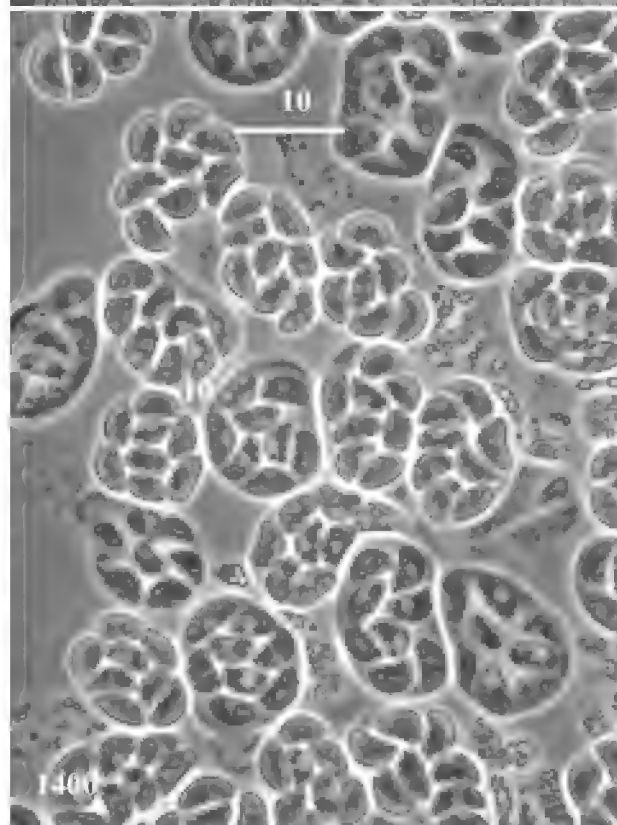
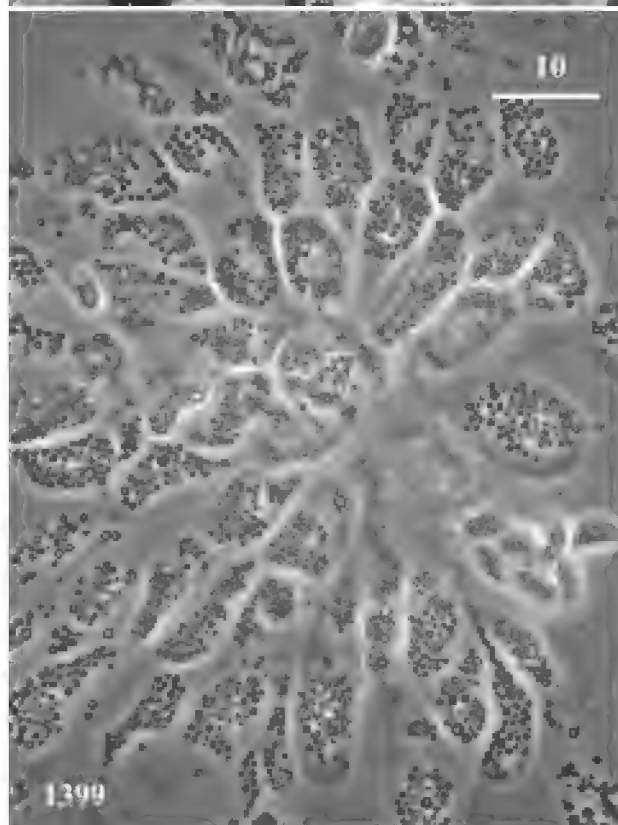
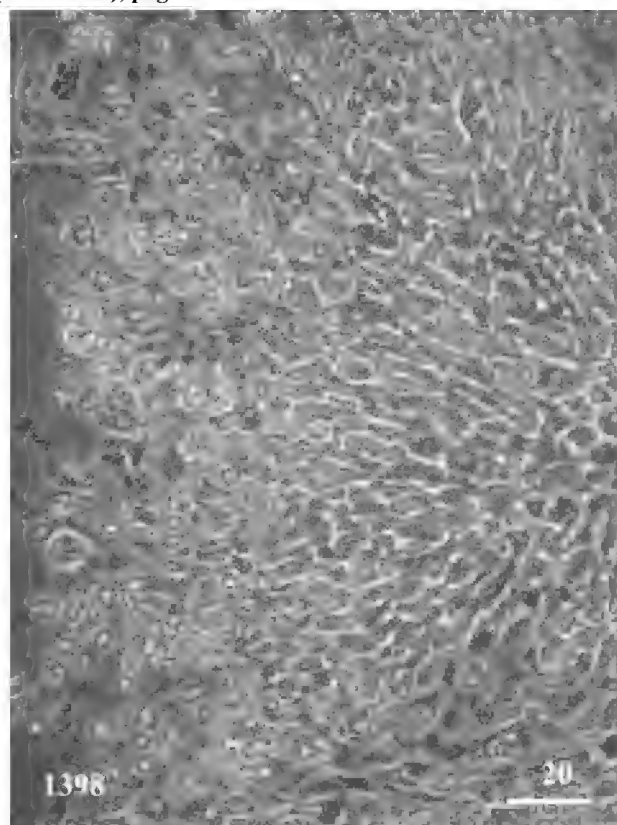
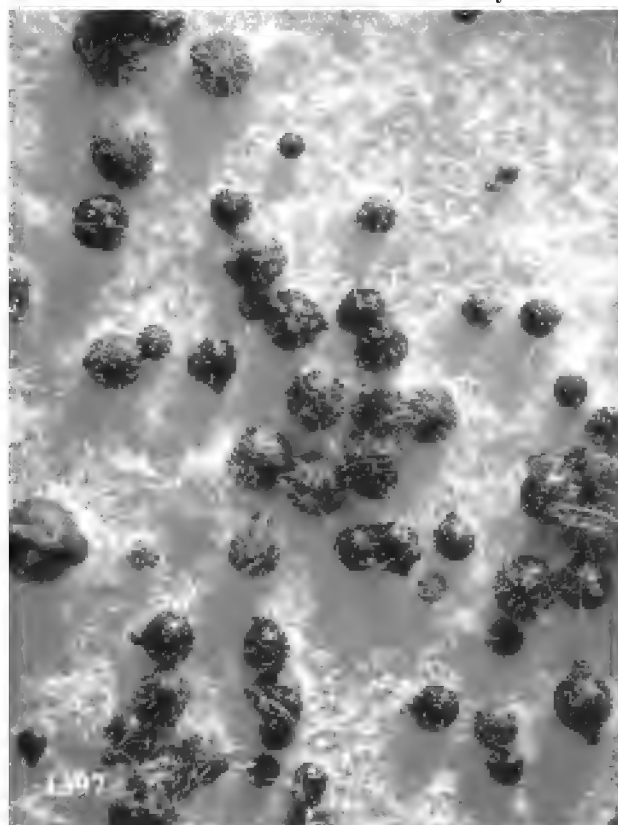
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1397 = Habit on CMA, showing black ascomata on white mycelial mat.

1398, 1399 = Very young asci in radiating chains, from a squashed ascoma, on CMA. ( by phase contrast )

1400 = Almost mature asci, from a squashed ascoma, on CMA. ( by phase contrast )

1401 = Mature ascospores.



**1369 *Viennotidea gliocladiopsisifera* sp. nov.**

Anamorphosis: *Gliocladiopsis tenuis* ( Bugnicourt ) Crous & Wingfield (1993), Mycol. Res. **97**: 446.

= *Cylindrocarpon tenue* Bugnicourt (1939), Encycl. Mycol. **11**: 178.

= *Gliocladiopsis sagariensis* Saksena (1954), Mycologia **46**: 663.

**Descr** Coloniae in CMA et b/c-medio effusae, hyphis aeriis pauperis, luteo-albae, ascomatibus et conidiophoris abundantibus. Ascomata dissita ad 2-3 gregaria, in forma *Ceratocystis* similia, pallide luteola, altitudine tota ( fimbriis apicalibus inclusa ) (330-)450-600  $\mu$ : corpora in agaro immersa, globosa, 70-95  $\mu$  diam.; parietes externe vis. textura angulari: colla longe cylindrica, (250-)350-515  $\mu$ , cum canale centrali angusta, supra corpora 25-35  $\mu$  crassa, sursum leviter angustata, sub apices 8-10  $\mu$  crassa, e hyphis parallelibus connatis septatis composita; ad apicem paralleles hyphae transformatae in fimbriatas hyphas, quae subulatae continuae hyalinae basi extrinsecus flexae (35-)50-70  $\mu$  longae. Asci in statu juvenissimo deliquescentes, aegerrime vidi, probabiliter globoidei, tetraspori vel octospori. Ascosporae botuliformes, frequenter leviter curvae, (5.5-)6.5-8.5(-10.5) x 2.5-3.5  $\mu$ , hyalinae, a fimbriis apicali ut massa pallide luteola muco conglutinata sustentae. Ascomata cito matura; in 4 diebus ascosporae exorientes ex colla fimbriis apicalibus nondum formatatis, in 5 diebus ascomata perfecte matura.

Anamorphosis est *Gliocladiopsis tenuis*. In CMA et b/c-medio *Gliocladiopsis tenuis* in diebus tribus perfecte matura; conidiis cylindricis, 1-septatis, 10-18 x 2-2.5  $\mu$ , hyalinis, pallide luteolis mucosis in massa. **Etym.**: *gliocladiopsisifera* <= this species "having *Gliocladiopsis*" *tenuis*-anamorphosis.

**Hab** Carioso ramunculo indet. arboris dicotyledonis in fundo sylvae; Murat, Skrang River basin, Sarawak, Malaysia; Nov. , 1999. **Typus**: cultura b/c-medio exsiccata, MFC-21042.

**Mem** The cultures have quickly lost the ability to form ascomata.

**Ref** E. V. Seeler (1943), Farlowia **1**: 119-133. // J. A. von Arx & E. Mueller (1954), Die Gattungen der amersporen Pyrenomyceten, Beitr. Krypt. Schweiz. **11** (1). // S. B. Saksena (1954), Mycologia **46**: 660-666. => *Gliocladiopsis sagariensis* gen. nov. et sp. nov.: conidiis cylindricis, medio 1-septatis, 18-24 x 1.5-2  $\mu$ . // R. F. Cain & L. K. Weresub (1957), Canad. J. Bot. **35**: 119-131. => *Sphaeronaemella fimicola*. // V. Agnihothrudu (1959). Trans. Br. mycol. Soc. **42**: 458-462. => *Cylindrocarpon tenue* Bugnicourt, = *Gliocladiopsis sagariensis* Saksena. // A. L. Negru & O. Verona (1966), Mycopath. mycol. appl. **30**: 305-313. => *Viennotidea spermosphaerici* gen. et sp. nov. Anamorph: *Gabaraudia*-like. // C. V. Subramanian (1971), Hyphomycetes, I.C.A.R., New Delhi. p. 729. *Cylindrocarpon tenue* Bugnicourt: conidia cylindrical, 1-septate, 9.5-25 x 1.3-2.8 ( av. 17 x 2 )  $\mu$ . // D. Malloch (1974), Fung. Canad. **53**. => *Sphaeronaemella helvella*, *S. fimicola*, *S. raphani*, and *S. spermosphaerici* are treated. // P. F. Cannon & D. L. Hawksworth (1982), Bot. J. Linnean Soc. **84**: 115-160. A re-evaluation of *Melanospora* Corda and similar Pyrenomycetes, with a revision of the British species. => *Sphaeronaemella* P. Karsten (1884) and *Viennotidea* P. Cannon & D. Hawksworth n. gen. are different genera. Four species of *Viennotidea*, i. e. *fimicola*, *humicola*, *sphaerosphaerici*, and *raphani* are described, with a key. // P. W. Crous & M. J. Wingfield (1993), Mycol. Res. **97**: 46. => They stated that *Gliocladiopsis* should be kept as a distinct genus from *Cylindrocarpon* Wollenweber (1913).

**Photo**

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1402, 1403, 1404, 1405, 1406, 1407, 1408, 1409, 1410, 1411 = Ascomata on CMA. ( divided in parts )

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1412, 1413, 1414 = Ascomata on CMA. ( divided in parts )

1415 = Ascomata on CMA.

1416, 1417 = Ascomata mature quickly. Tips of young ascomata, apical fimbriae not yet formed, but already mature ascospores oozing out. After 4 days.

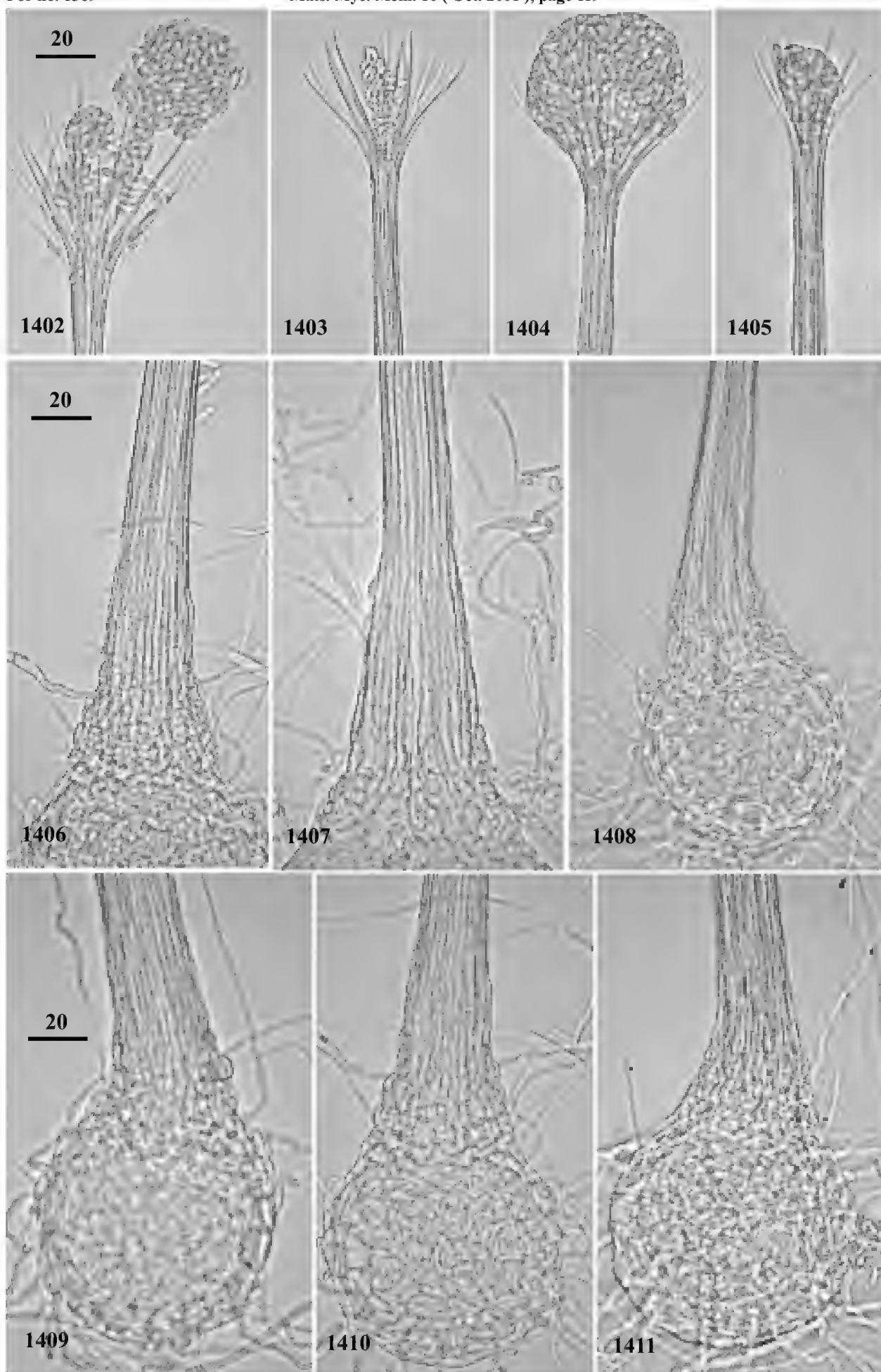
page 121

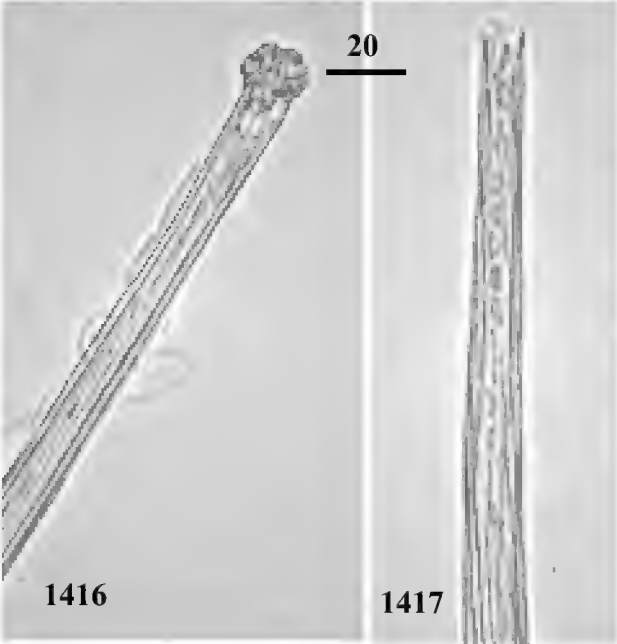
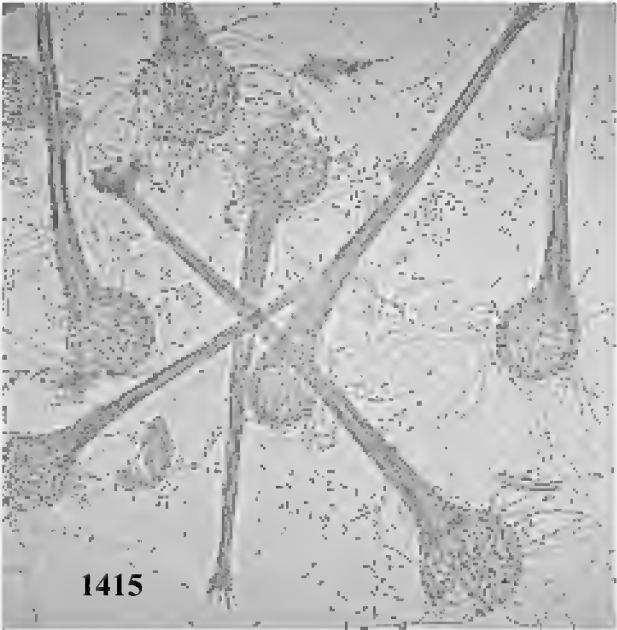
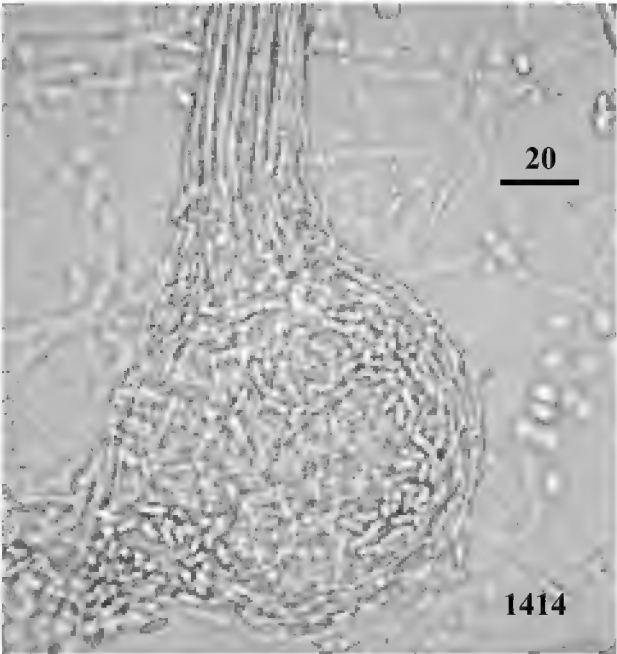
1418, 1419 = Ascospores and asci from squashed young ascomata. ( 1418 by phase contrast )

1420 = Oozed out ascospores.

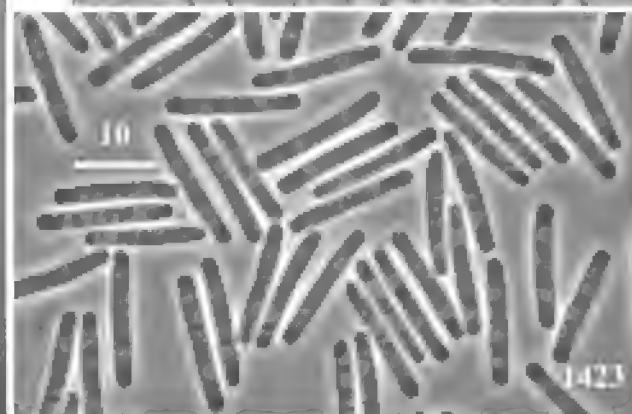
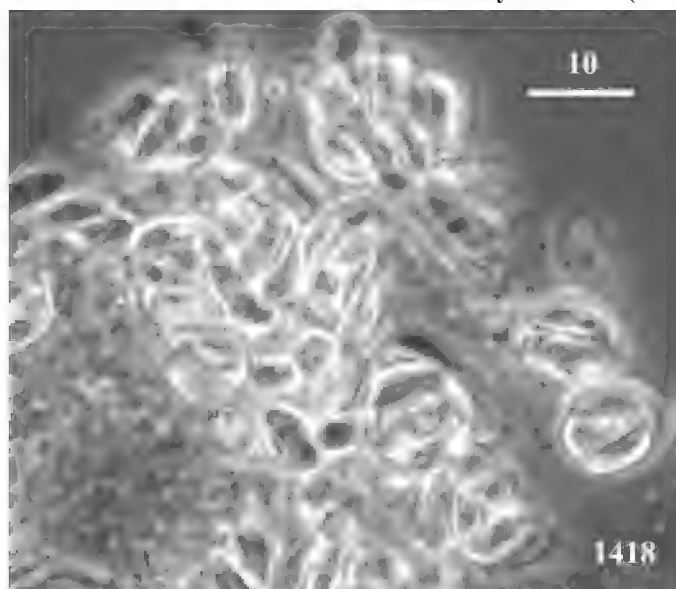
1421, 1422 = Conidiophores of *Gliocladiopsis tenuis* , from b/c-medium. ( 1422 by phase contrast )

1423 = Conidia of *Gliocladiopsis tenuis* , from b/c-medium. ( by phase contrast )









**1370 *Niesslia sukauensis* sp. nov.**

Anamorphosis: *Monocillium* sp.

**Descr** In hospite: *Niesslia*-status: Ascomata superficialia, dissita ad 2-3 gregaria, globosa, minute papillata, 120-160  $\mu$  in diam., atera, setosa; setae 6-13 per ascoma, simplices, rectae, rigidae, continuae, atro-brunneae, acutae, (40-)60-120  $\mu$  longae. Paraphyses torulosae, hyalinae, maturitate deliquescentes. Asci cylindro-fusiformes, apice inconspicue porosae, oblique uniseriate biseriate irregulariterve octospori. Ascospores cylindro-fusiformes, frequenter parce inaequilaterales, medio 1-septatae, verruculosae, hyalinae, 12-19 x 2.0-2.5  $\mu$ . Consortione *Monocillium*-anamorphosis in specimine originario non observo.

*Monocillium*-status: Culturae ex ascosporis originatae. Coloniae in b/c-medio effusae, albae, sub lente aspectu albae farinosaeque ob conidiales guttulas abundantes minutas; hyphae vegetativae ramosae, septatae, 1.5-4  $\mu$  latae, laeves, hyalinae. Conidiophora cellulas conidiogenas reducta. Cellulae conidiogenae e hyphis repentibus aeriis solitariis funiculosaeve oriundae, mononematosae simplices erectae hyalinaeque, longitudine tota 32-80  $\mu$ , ex 3 partibus compositae: (1) infra caulis tenuiter cylindricus crassitunicatus, 15-45 x 1.2-1.5  $\mu$ ; (2) medio vesicula leviter inflata tenuiter fusiformis tenuitunicata, 10-20  $\mu$  longa, circum medium parte crassissima 2-3.5  $\mu$  lata; (3) supra collum cylindricum tenuitunicatum fractiflexum ( in anglico "zig-zag " ), 7.5-12.5  $\mu$  longum, ca. 1  $\mu$  latum, ad orem pariete periclinali inconspicue spissescenti. Conidia cylindro-ellipsoidea, unicellularia, (4.5-)5-6.5(-7.5) x 1.5-2  $\mu$ , laevis, hyalina, guttulas minutas hyalinas aggregata. Consortione phialidibus fila sterilia hyalina, infra cylindrica crassitunicata, supra clavata tenuitunicata 7-13 x 3-3.5  $\mu$ , in numero parvo adsunt. Teleomorphosis deficiens.

Coloniae in CMA modice crescentes, agaro modice rubro-purpureo colorato, stato *Monocillii* abundanti, margine fere sterili pallide brunnei definiti. Teleomorphosis deficiens. **Ety.** *sukauensis* <= the type locality of this fungus.

**Hab** Folio carioso indet. arboris dicotyledonis, in fundo sylvae densae, Sukau, Sabah, Malaysia; Nov. 1999. **Typus**: MFC-21043.

**Mem** This new species has some similarity to *Niesslia exosporioides* ( Desm.) Winter both in teleomorph and anamorph states. P. M. Kirk (1984), Mycotaxon **19**: 307-322, p. 318-319. => *Niesslia exosporioides* : ascospores 1-septate, 7-9 (-10) x 1.5-2  $\mu$ ; conidia non-septate, 4-7 x 1-1.5  $\mu$ . ] // The anamorph of this new species is similar to *Monocillium indicum* Saksena, specially in the form of phialides. ( Indian Phytopath. **8**: 11. 1955 / C. V. Subramanian & M. Pushkarn, Kavaka **3**: 77-99. 1975 / Mats. Myc. Mem. **6**, p. 42, no. 757. 1989 ).

**Ref** W. Gams (1971), *Cephalosporium*-artige Schimmelpilze ( Hyphomycetes ), Stuttgart. => *Niesslia exosporioides* ( Desm.) Winter [ ascospores 7.0-9.5 x 1.5-1.7  $\mu$  ], anamorph *Monocillium granatum* ( Fuckel ) W. Gams c. nov. [ conidia 5.6-6.5 x 1.2-1.5  $\mu$  ]; *Niesslia exilis* ( Alb. et Schw. per Fr. ) Winter [ ascospores 10-12 x 1.2-2.5  $\mu$  ], anamorph *Monocillium* sp. [ one-celled conidia 5.5-10.7 x 1.3-2.0  $\mu$ , two-celled conidia 9-15 x 1.6-2.3  $\mu$  ]; *Niesslia exigua* ( Sacc.) Kirschst. [ ascospores 7.0-8.5 x 2.0-2.7  $\mu$  in CBS 152.68 / 8.0-10.5 x 2.2-3.0  $\mu$  in the type collection ], anamorph *Monocillium* sp. [ conidia 3.8-4.6 x 1.3-1.4  $\mu$  ]. // A. W. Ramaley (2001), Mycotaxon **79**: 267-274. => *Hyaloseta nolinae* gen. et sp. nov. , anamorphosis *Monocillium nolinae* sp. nov. ( p. 269 ) / *Niesslia agavacearum* sp. nov., anamorphosis unknown. ( p. 272-273 ).

**Photo**

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1424, 1425, 1426, 1427, 1428 = Ascomata from the specimen, gently squashed.

1429 = Asci and ascospores from the specimen.

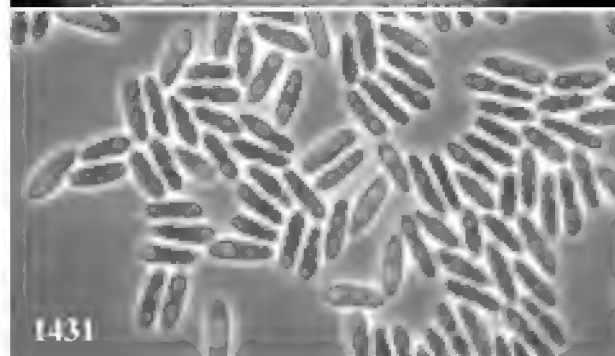
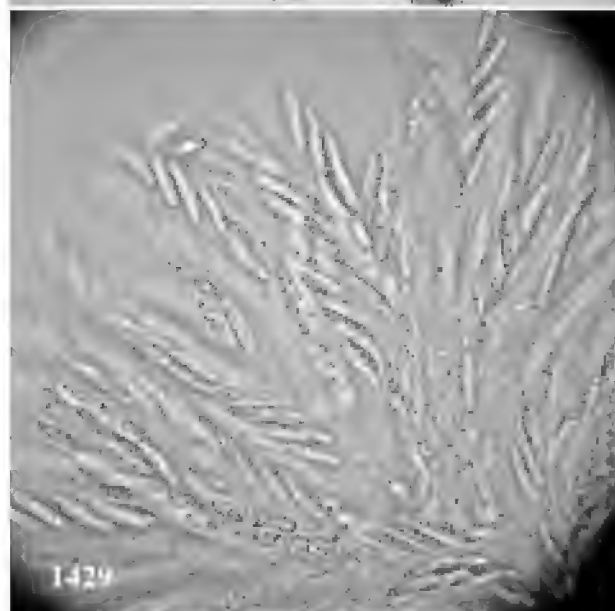
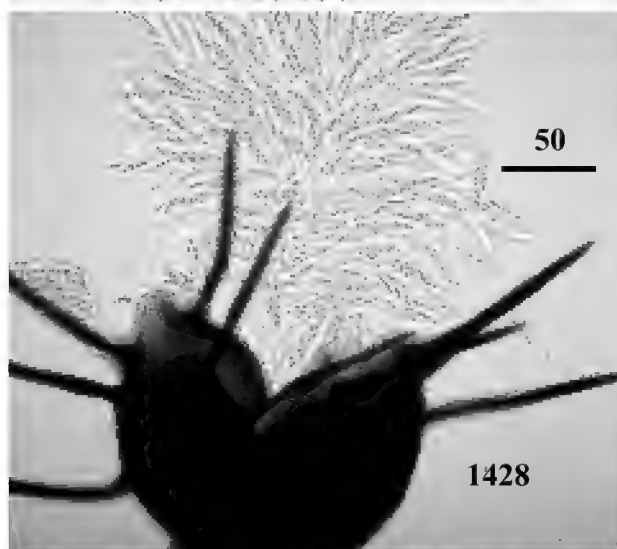
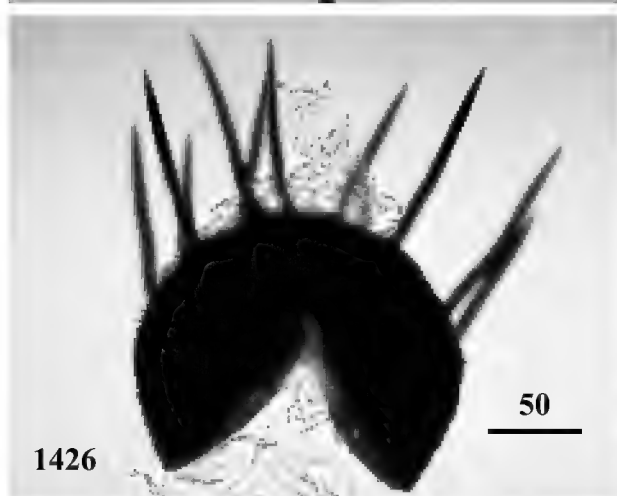
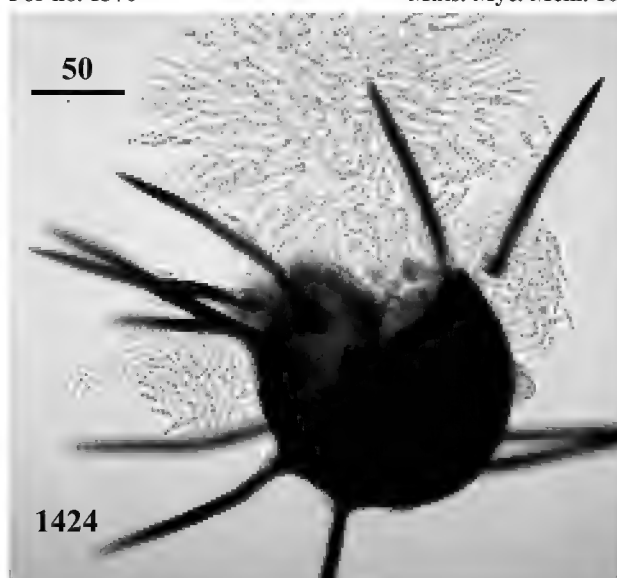
1430, 1431 = *Monocillium* conidia from b/c-medium. ( by phase contrast )

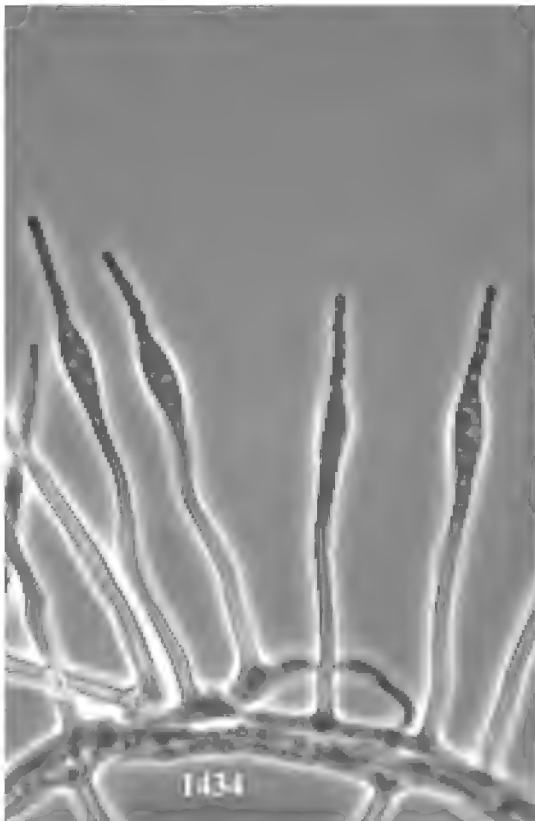
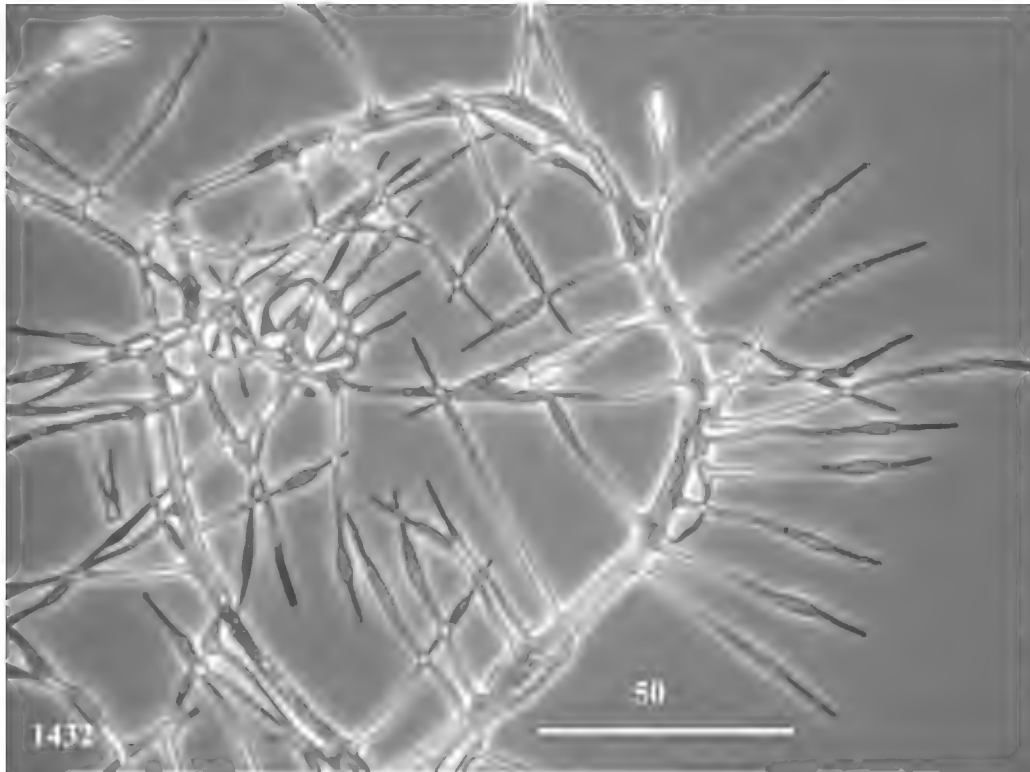
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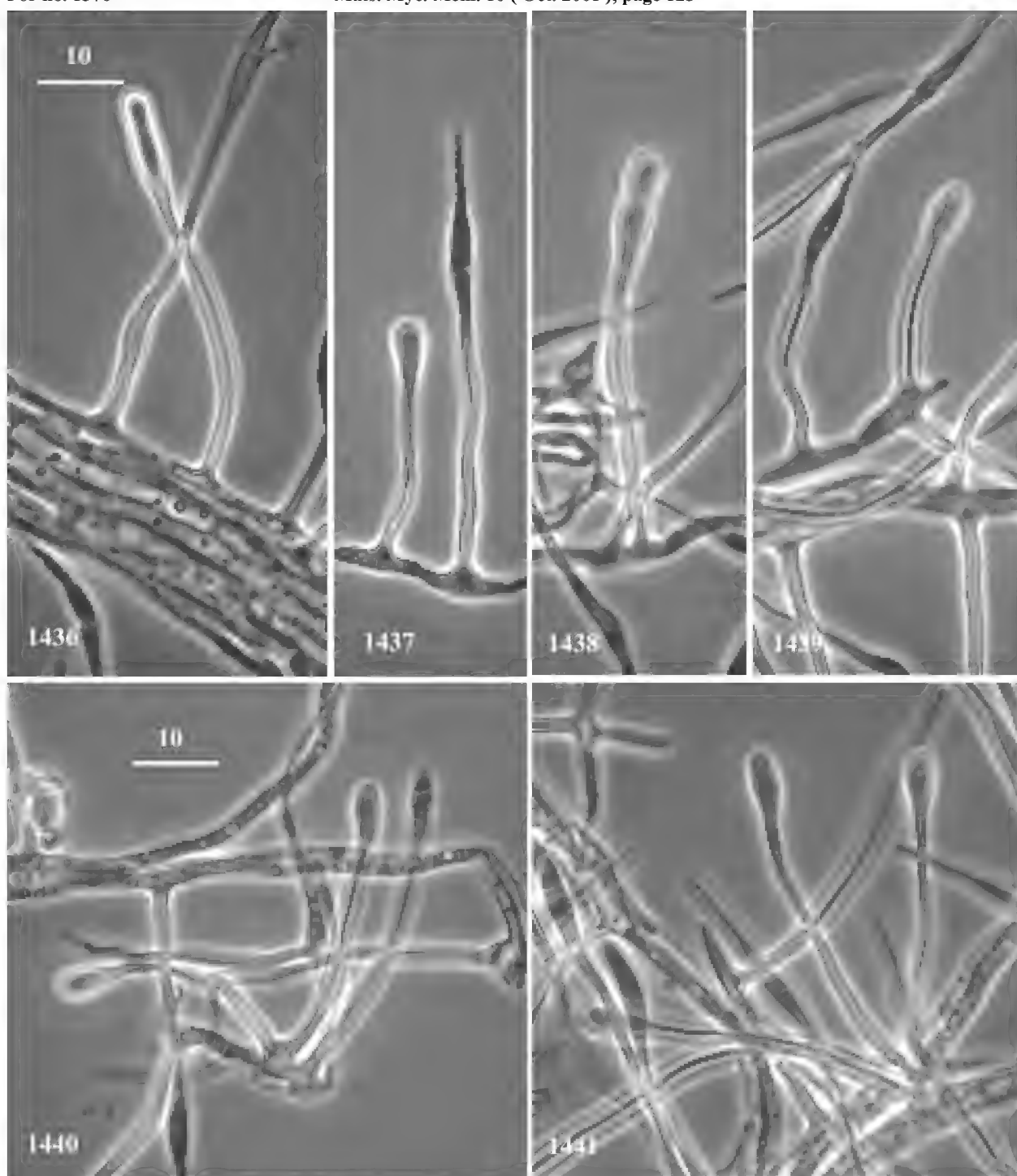
1432, 1433, 1434, 1435 = *Monocillium* phialides from b/c-medium. ( by phase contrast )

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1436, 1437, 1438, 1439, 1440, 1441 = Steril clavate structures from b/c-medium. ( by phase contrast )







**1371 *Valetoniella pauciornata*** G. J. Samuels & M. E. Barr, (1997), Canad. J. Bot. **75**: 2175.

**Descr** Ascomata in specimine superficialia, dissita ad gregaria, plusminusve globosa, 180-210  $\mu$  alta, 165-200  $\mu$  lata, ostiolo parvo rostrato, atro fusca, setas characteristicas gerentia; parietes externe vis. textura angulari, tenues, membranacei, modice brunnei; setae simplices, 25-90  $\mu$  longae, continuae, crassitunicatae, lumine deminuto, laeves, atro-brunneae, apice characteristice stellatiformiter divisae. Asci fasciculati, cylindro-clavati, unitunicati, octospori, sine apparato apicali, maturitate deliquescentes. Ascosporae maturitate irregulariter in dimidio distali in asco dispositi, oblongae ad obovoideae, 7.5-10 (-12.5) x 2.5-3.5  $\mu$ , 1-septatae, non vel leviter ad septum constrictae, laeves, hyalinae, albae in massa.

**Hab** MFC-20129. Folio carioso indet. *Querci*; Akame Valley, Mie Pref., Japan; July 1999.

**Mem** *Stellosetifera malaysiana* Matsushima (1996), in Mats. Myc. Mem. **9**: p.26, no. 1321, should be a species of *Valetoniella*, and is similar to *Valetoniella pauciornata*. *Stellosetifera malaysiana* has *Penicillifer variabilis* Matsushima (1975) as anamorph. // The following species have more or less similar dark stellate setae: *Taphrophila* spp. ( with bitunicate asci ), *Tubeufia trichella* ( with bitunicate asci ), *Wentomyces sibiricus* ( with bitunicate asci ), *Taiwanascus tetrasporus* ( with unitunicate asci ); pycnidial setae of *Staurophoma panici* von Hoehnel, *Staurochaete minima* Sacc.

**Ref** E. Mueller & R. W. G. Dennis (1965), Kew Bull. **19**: p. 358. => *Trichosphaerella arecae* ( Syd.) E. Mueller: asci unitunicate; ascosporis 1-septated, readily into part-spores; superficially similar to *Wentomyces*. // CH. Scheuer (1991), Mycol. Res. **95**: 811-816. // D. L. Hawksworth & A. Sivanesan (1976), Trans. Br. mycol. Soc. **67**: 477-483. // A. Sivanesan & H. S. Chung (1997), Mycol. Res. **101**: 176-178. // G. J. Samuels & M. E. Barr (1997), Canad. J. Bot. **75**: 2165-2176. Notes on and additions to the *Niessliaceae* ( *Hypocreales* ). => *Valetoniella pauciornata*: ascospores 7-9(-10) x (2-)2.5-3(-3.5)  $\mu$ .

**Photo**

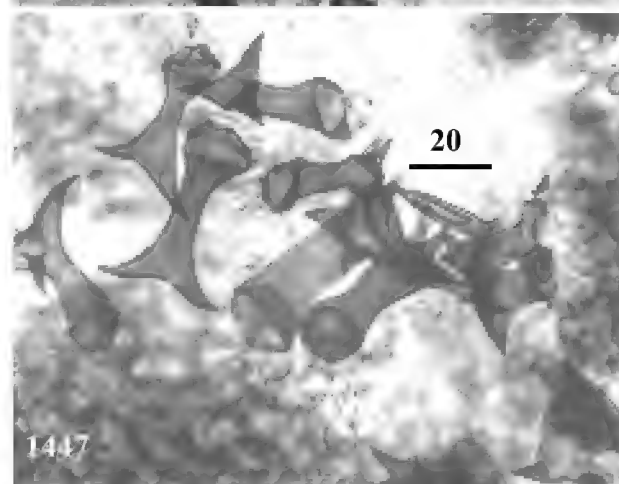
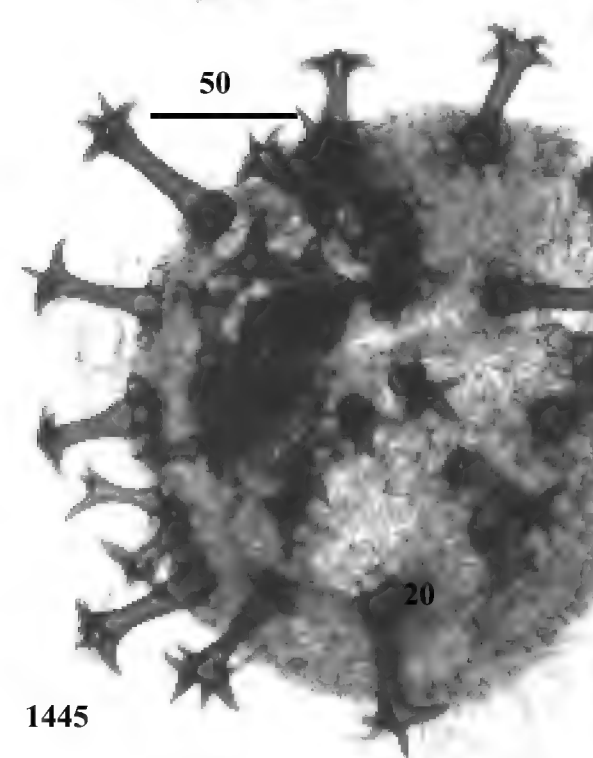
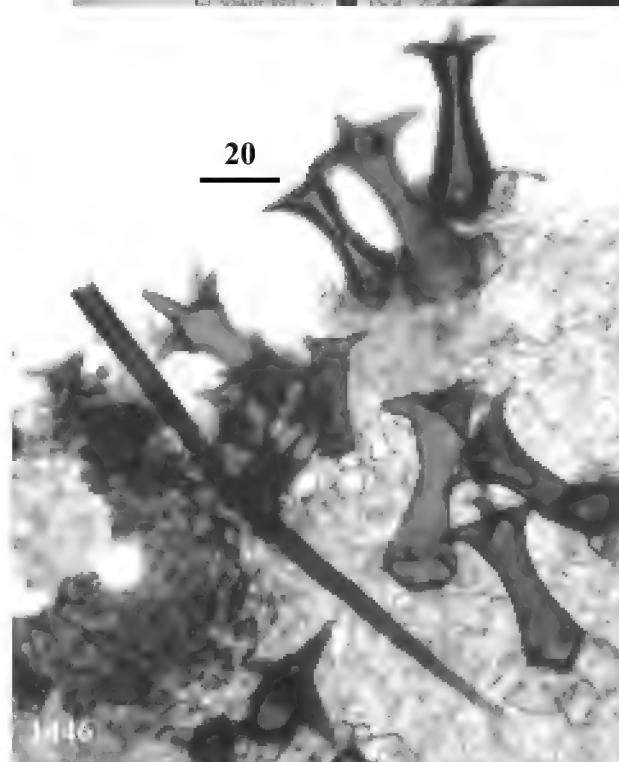
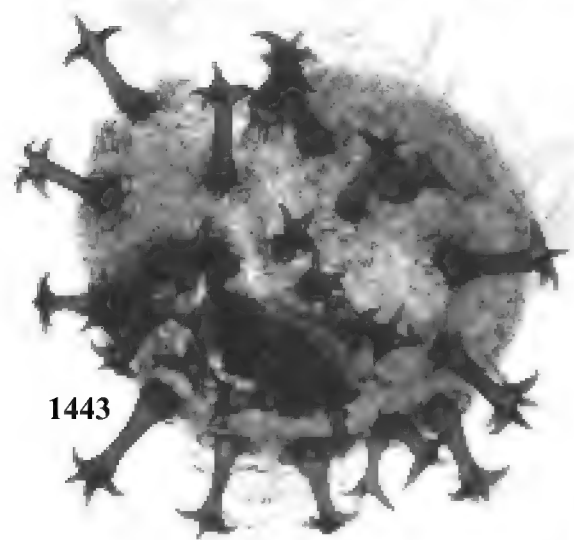
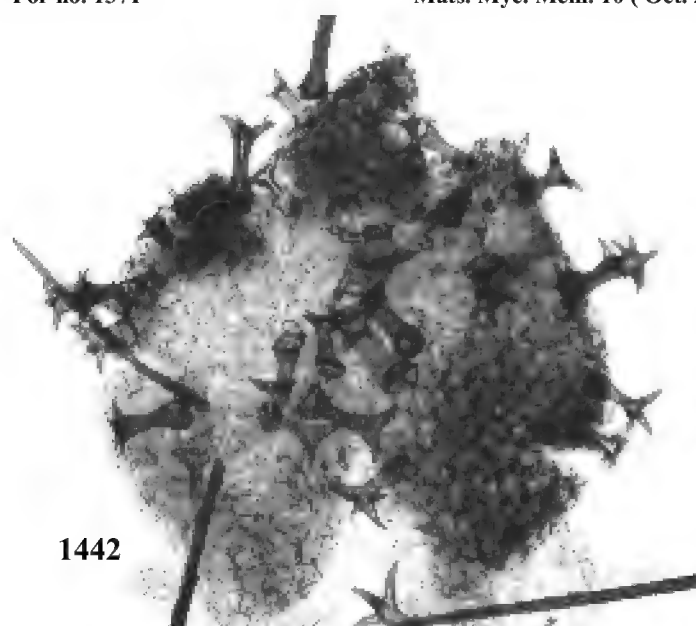
page 127

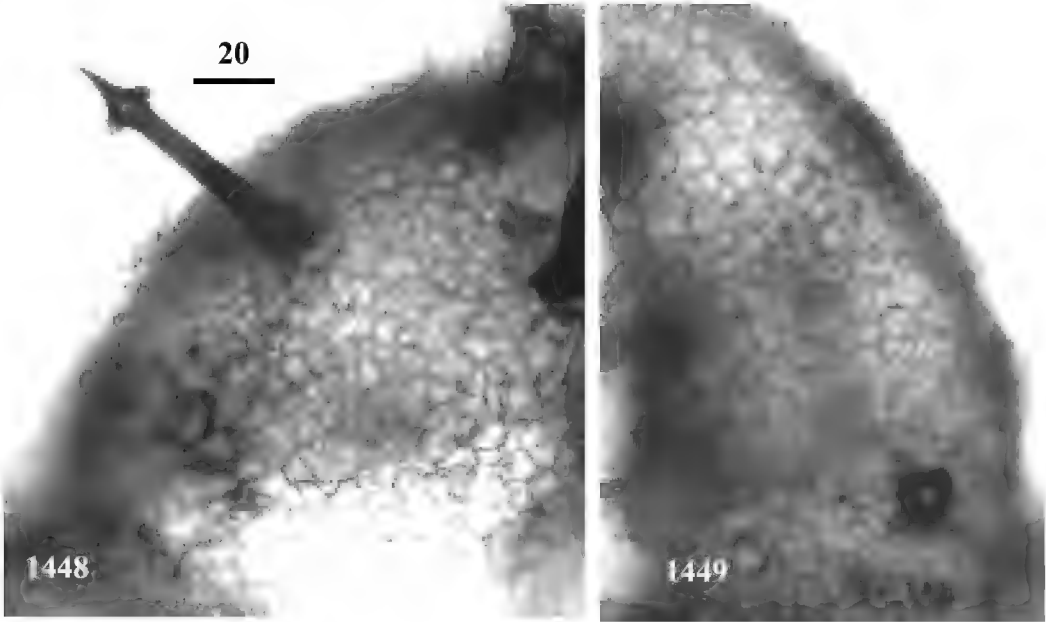
1442, 1443, 1444, 1445, 1446, 1447 = Ascomata from the specimen.

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1448, 1449 = Ascomata from the specimen, squashed, showing peridium of *textura angularis*.







**1372 *Nectria flocculenta*** ( Hennings & Nyman ) von Hoehnel (1912), Sitzungsber. Kaiserl. Akad. Wiss., Math.-Naturwiss. Kl. Abt. 1, **121**: 360.

Anamorphosis: *Sarcopodium macalpinei* ( Agnihothrudu & Baur ) B. C. Sutton (1981), Trans. Br. mycol. Soc. **76**: 99. / == *Kutilakesopsis macalpineae* Agnihothrudu & Barua (1957), J. Indian. Bot. Soc. **36**: 309.

**Descr** Coloniae in b/c-medio diffusae, hyphis aeriis albis, conidiomatibus et peritheciis dispersis. *Nectria*-teleomorphosis: Perithecia superficialia, dissita ad gregaria, subculis albis ad pallide aurantiacis insidentia, obpyriformia, 145-325 x 95-260  $\mu$ , aurantiaca ad luteorubra, setis brevibus circinatis septatis brunneis 5-6  $\mu$  latis dense verruculatis. Setae perithecorum recordatae isdem sporodochiorum. Asci anguste claviformes, octospori, maturitate deliquescentes. Ascosporae ellipsoideae, 1-septatae, 10-15 x 3.5-6  $\mu$ , superficie longitudinaliter vel leviter oblique striatae, hyalinae, pallide aurantiacae in massa.

*Sarcopodium*-anamorphosis: Sporodochia pulvinata, frequenter confluentia, margine plusminusve irregularia; setae simplices, parte inferiore rectae hyalinae, parte superiore sinuosae, e strato hymenii extrudentes, septatae, brunneae, (3.5-)4.5-5.5(-6)  $\mu$  latae, dense verruculosae, apice obtusae; conidiophora dense contigua, ramosa, hyalina; cellulae conidiogenae lageniformes ad subcylindricae, generaliter in metulis ( ramis terminalibus ) fasciculatae, 9-20(-22) x (2-)2.5-4.5  $\mu$ , enteroblasticae-phialidicae, apice angustatae, ad orem parietibus periclinalibus spissescens. Conidia cylindro-ellipsoidea, praecipue medio 1-septata, 7.5-13.5 x 2.5-3.5(-4.5)  $\mu$ , interdum continua (5-)6.5-8(-10) x 2.5-3(-4)  $\mu$ , rarissime 2-septata, laevia, hyalina, pallide lutea mucosa in massa. Additamentum ad sporodochia supra descripta, conidiophora mononematosa dispersa.

**Hab** MFC-21067. E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Murat, Skrang River basin, Sarawak, Malaysia; Nov. 11, 1999.

**Mem** Culturae post repetitas transplantationes sine peritheciis et cum sporodochiis fere sine setis.

**Ref** V. Agnihothrudu & G. C. S. Barua (1957), J. Indian. Bot. Soc. **36**: 309-310.  $\Rightarrow$  *Kutilakesopsis macalpineae* gen. et sp. nov.: on the host conidia 1-septate, 9.6-16.8 x 1.6-4.8 ( 13.6 x 2.8 )  $\mu$ . // T. R. Nag Raj & H. C. Govindu (1969), Sydowia **23**: 110-117.  $\Rightarrow$  *Nectria flavolanata* Berkeley & Broome with anamorphosis *Kutilakesopsis macalpineae* Agnihothrudu & Barua. // S. A. Alfieri & G. J. Samuels (1979), Mycologia **71**: 1178-1185.  $\Rightarrow$  *Nectriella pironii* sp. nov. with *Kutilakesa* (= *Sarcopodium*) anamorph. // B. C. Sutton (1981), Trans. Br. mycol. Soc. **76**: 97-102.  $\Rightarrow$  *Kutilapesa* Subram. (1956), *Kutilakesopsis* Agnihoth. & Barua (1957), *Actinostilbe* Petch (1925), etc. are reduced to the synonyms of *Sarcopodium* Ehrenb. ex Schlecht. (1824); *Sarcopodium vanillae* comb. nov. and *Sarcopodium macalpinei* comb. nov. described and illustrated. // G. J. Samuels, Y. Doi & C. T. Rogerson (1990), Mem. N. Y. Bot. Garden **59**: 6-108. p. 62, 65-67.  $\Rightarrow$  *Nectria flocculenta*: ascospores ellipsoidal to narrowly fusiform, equally 2-celled, 9.9-13.2(-17) x (2.5-)3.2-4.3(-6)  $\mu$ , striate. *Kutilakesopsis macalpineae*: conidia in culture: oblong, equally 2-celled, (6-)7.4-10.9(-14) x 2.5-3.3(-4.5)  $\mu$ . // Mats. Myc. Mem. **7**, no. 962. 1993.  $\Rightarrow$  *Sarcopodium macalpinei*: conidia 1-septate, 8-12 x 2.8-4  $\mu$ . // G. J. Samuels & D. Brayford (1994), Sydowia **46**: 75-161. Species of *Nectria* ( sensu lato ) with red perithecia and striate ascospores.

#### Photo

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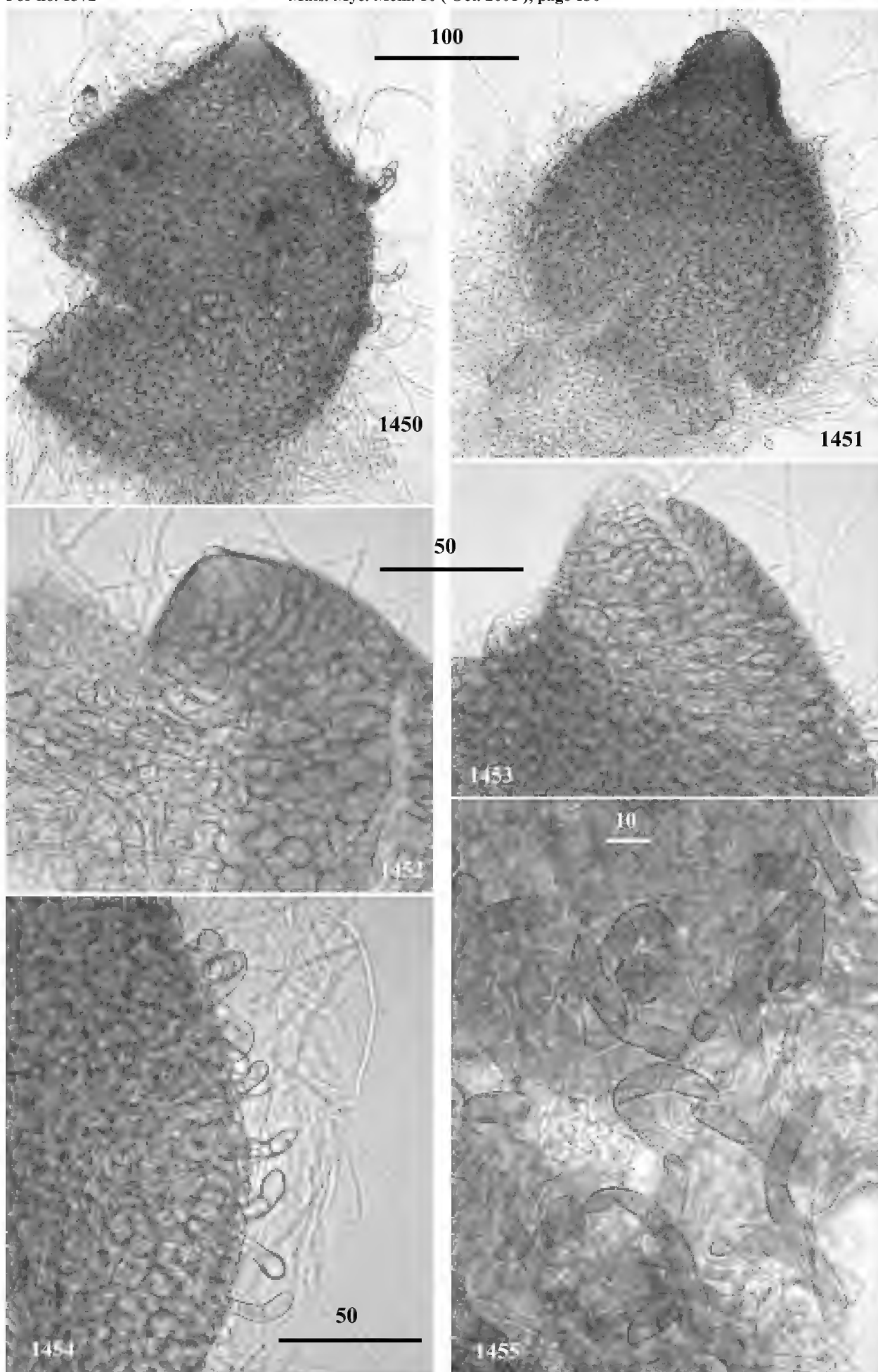
1450, 1451, 1452, 1453 = Perithecia from b/c-medium.

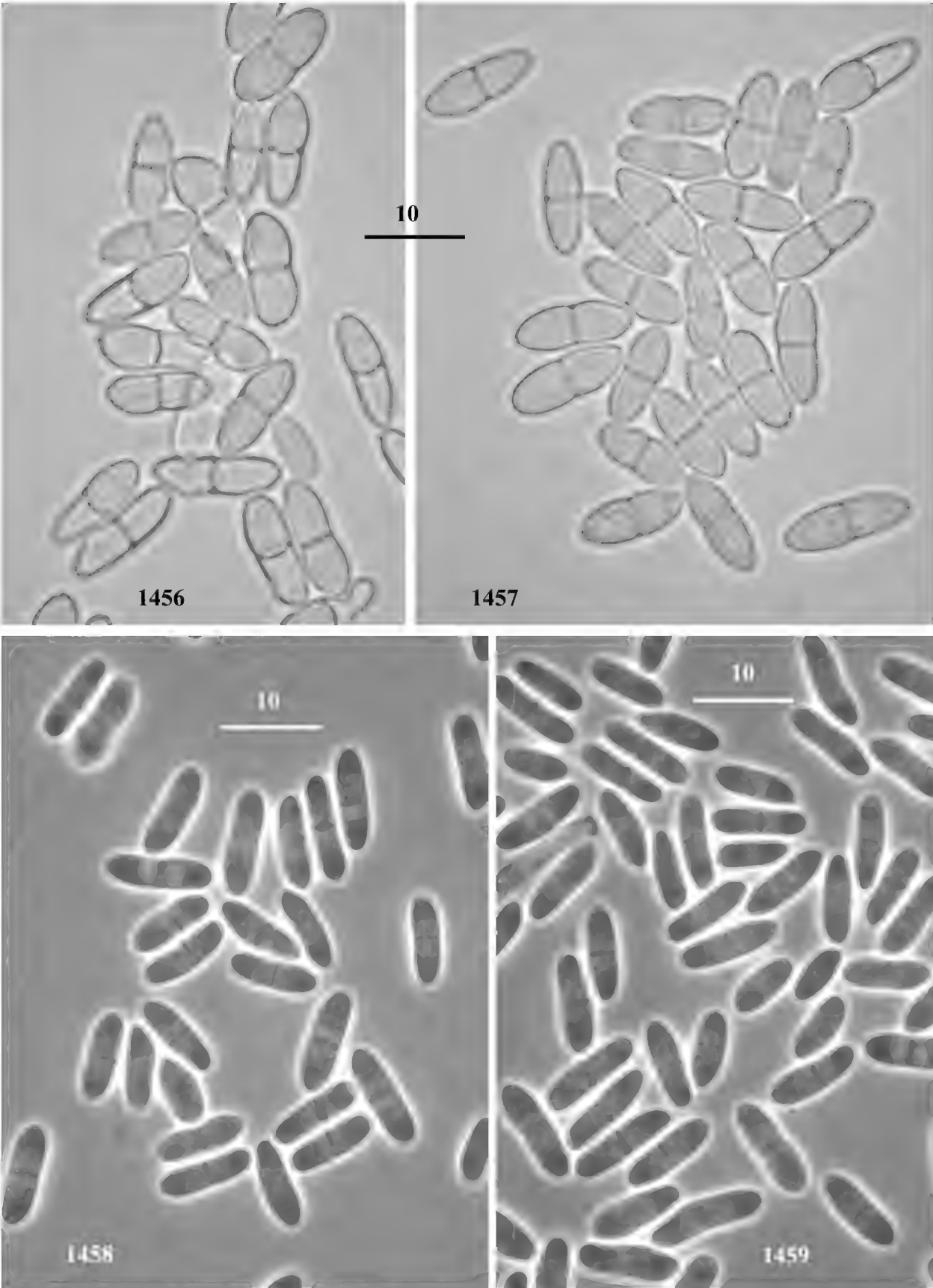
1454, 1455 = Hooked perithecial setae.

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1456, 1457 = Ascospores.

1458, 1459 = *Sarcopodium* conidia. ( by phase contrast )





**1373** *Nectria calami* ( P. Henn. & E. Nym. ) Rossman, Mycotaxon **8**: 494. 1979.

**Descr** Coloniae in b/c-medio diffusae, mycelio aërio modice evoluto, albae ad pallide brunneolae, peritheciis aurantiacis dissitis. Perithecia solitaria vel 2-3 gregaria, subiculis albis ad pallide brunneolis insidentia, subglobosa, 175-350  $\mu$  diam., luteo-aurantiaca ad pallide aurantiaca, vetustate brunnea, ostiolo parvo non rostrato ad instar valli circularis, frequenter in sicco cupulata. Paries pseudo-parenchymaticus, externe vis. textura angulari. Paraphyses inconspicuae, cylindricae, simplices, 2.5-3  $\mu$  latae, non-septatae, apicem versus angustatae, deliquescentes. Asci in fasciculo ad basim perithecii dispositi, cylindro-fusiformes pede brevi, unitunicati, octospori, juventute praecipue oblique uniseriatae, maturitate irregulariter dispositae, apice apparato inconspicuo annuliformi. Ascosporae cylindro-fusiformes, frequenter leviter inaequilaterales, 1-7-septatae, generatim 3- vel 5-septatae, predominantiter 5-septatae, ad septa non vel leviter constrictae, in isdem 1-septatis 12.5-16 x 3-4  $\mu$ , in isdem 3-septatis 16-20 x 3.5-5  $\mu$ , in isdem 5-septatis 20-30 x 3.5-6  $\mu$ , laeves, hyalinae, ex ostiolo in cirrho pallide aurantiaco exorientes. Anamorphosis nullus deest.

In CMA peritheciis ut in b/c-medio.

**Hab** MFC-21005, MFC-21079. E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Mt. Rokko, Kobe, Japan; March 1999.

**Mem** The present fungus has some similarity to *Nectria decora* ( Wallroth ) Fuckel (1869-1870).

**Ref** C. G. Hansford (1941), Proc. Linnean Soc., London **153**: 4-52.  $\Rightarrow$  p. 34: *Calonectria kampalensis* ( ut *kampalense* ) Hansf. (= *Nectria calami*, fide Rossman, 1979 ); ascosporae curvulae, cylindratae, utrinque acutae, hyalinae, leves, 5-9-septatae, haud constrictae, 32-38 x 4-5  $\mu$ ; cellulae 2-guttulatae. Hab. in foliis emortuis humidis *Musae sapientium*, Kampala. // K. A. Pirozynski (1975), Fungi Canadenses No. 74. *Calonectria decora*. // A. Y. Rossman (1979), Mycotaxon **8**: 321-328. *Calonectria* and its type species, *C. daldiniana*, a later synonym of *C. pyrochroa*. // A. Y. Rossman (1979), Mycotaxon **8**: 485-558. A preliminary account of the taxa described in *Calonectria*. // A. Y. Rossman (1983), Mycol. Pap. **150**. The phragmosporous species of *Nectria* and related genera.  $\Rightarrow$  *Nectria calami*, *Nectria decora*, etc. // P. W. Crous, M. J. Wingfield & A. C. Alfenas (1993), Mycotaxon **46**: 217-234. Additions to *Calonectria*.

**Photo**

page 133

1460 = Habit, perithecia on b/c-medium.

1461 = Ascoma, gently squashed.

1462 = Peridium in squashed mount, outside and inside.

1463 = Outermost surface of perithecial peridium, *textura angularis*.

1464 = Ostiole, small palisade-like.

1465 = Section of ascoma peridium.

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1466 = Young asci. ( by phase contrast )

1467, 1468 = Apical annula of asci. ( by phase contrast )

1469, 1470, 1471 = Asci from squashed ascomata. ( in phase contrast )

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1472, 1473, 1474 = Ascospores of MFC-21005 from squashed asci. ( by phase contrast )

1475, 1476, 1477 = Ascospores of MFC-21079 from squashed asci. ( by phase contrast )

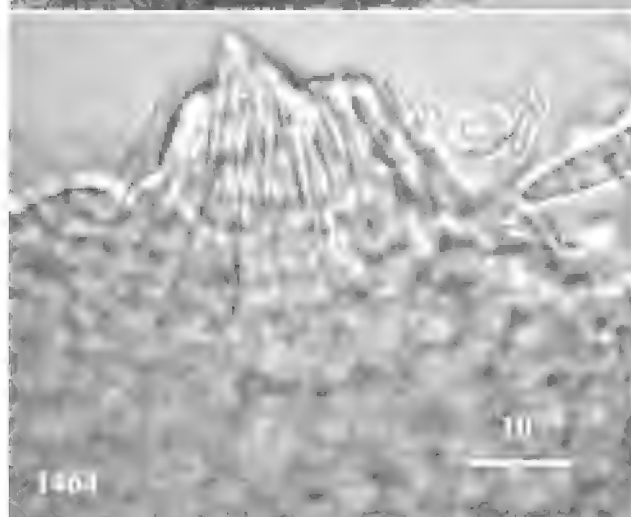
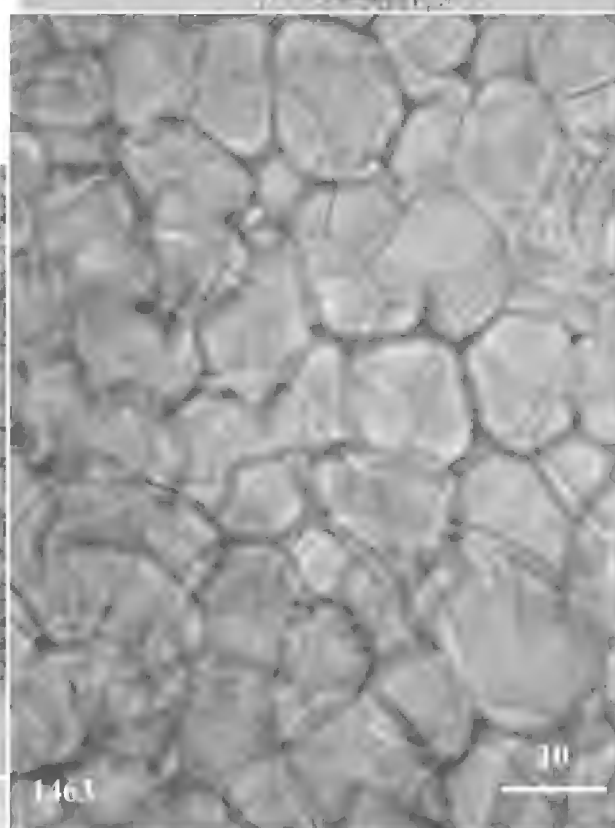
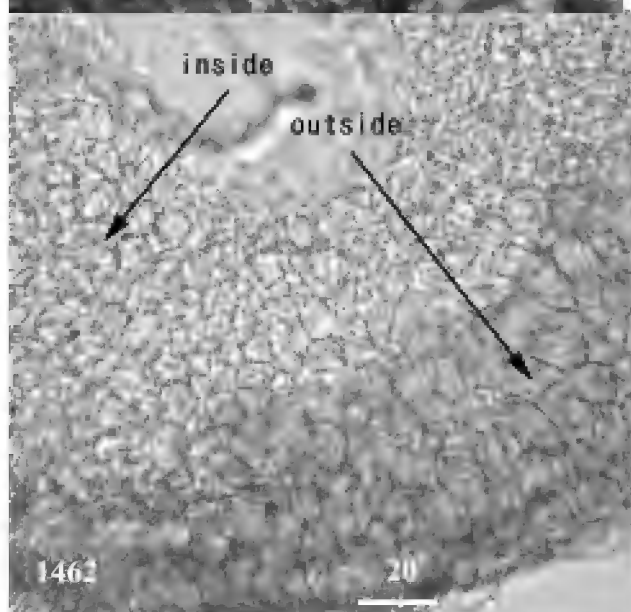
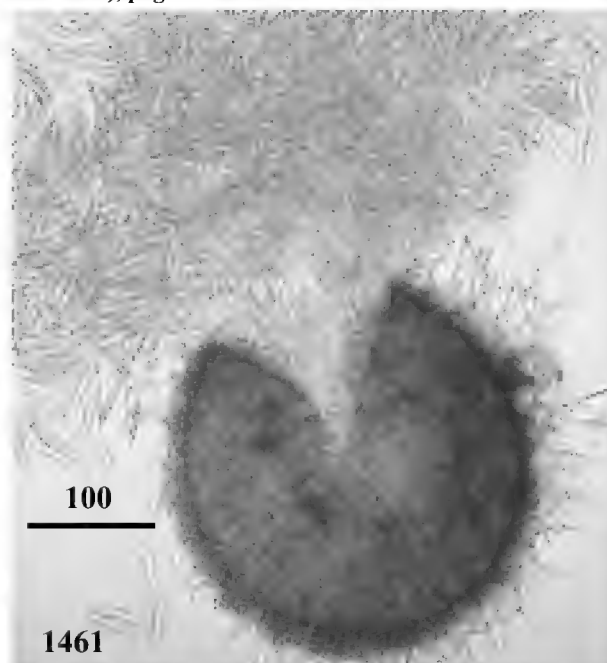
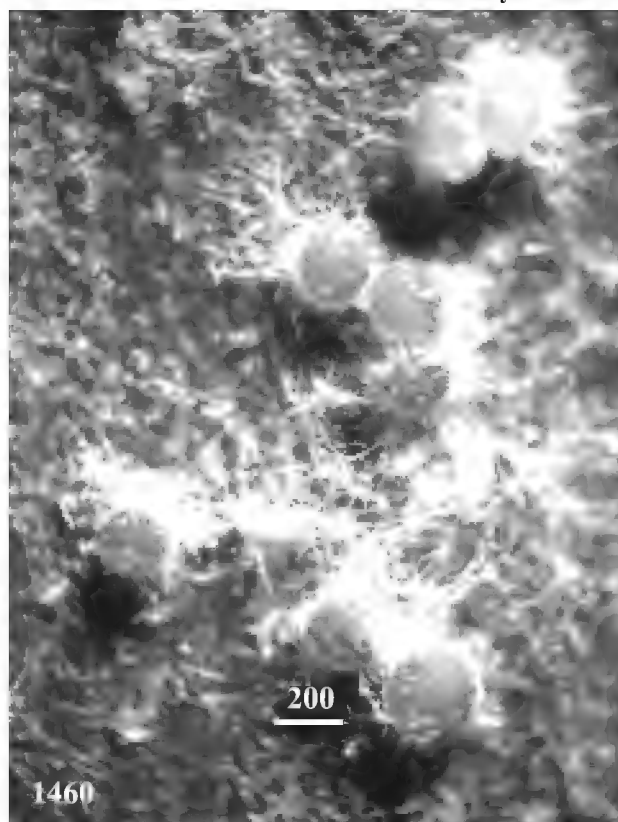
page 209 ( color plate )

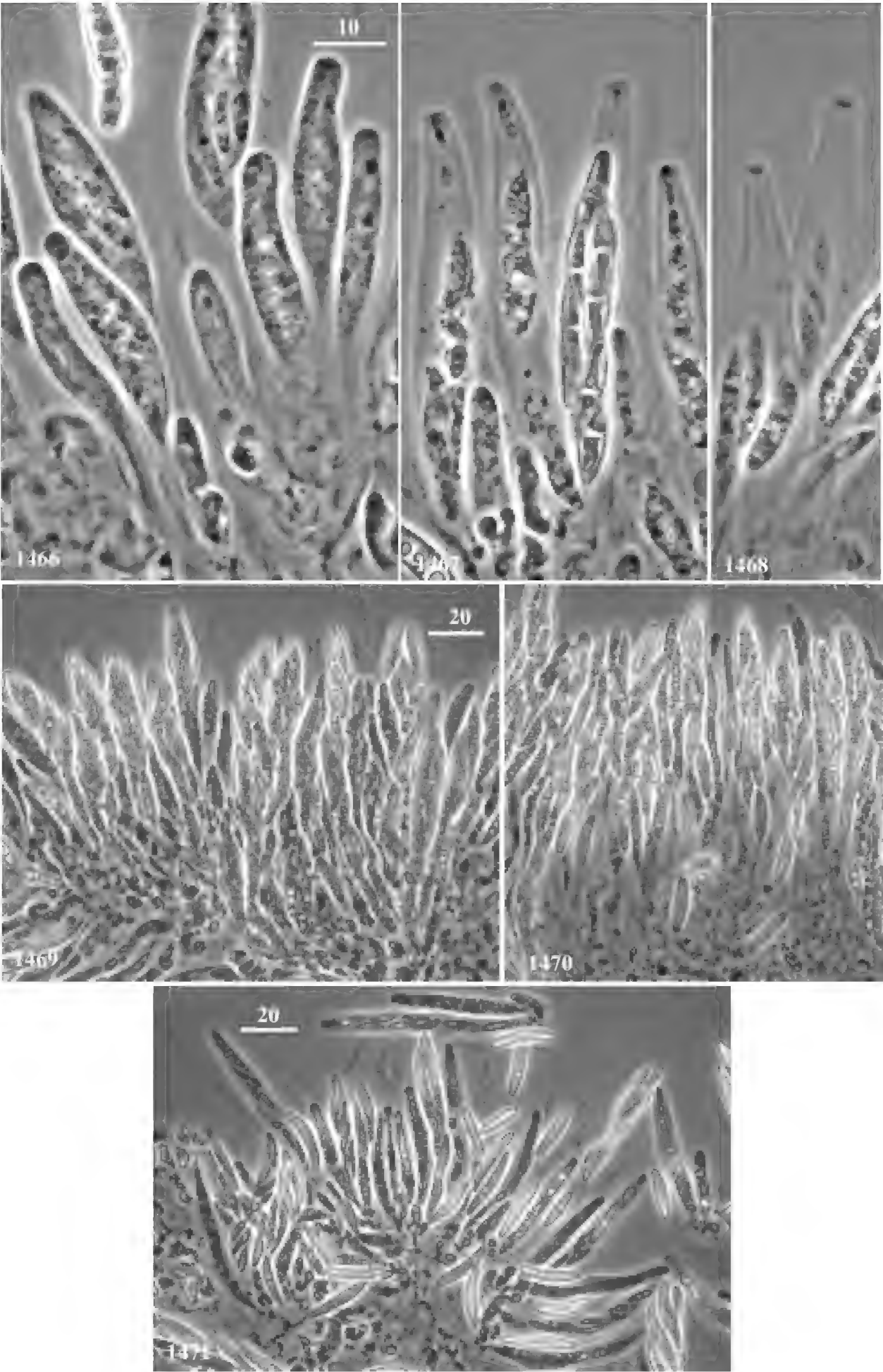
1802, 1803, 1804, 1805, 1806 = Habit, perithecia on b/c-medium. MFC-21005.

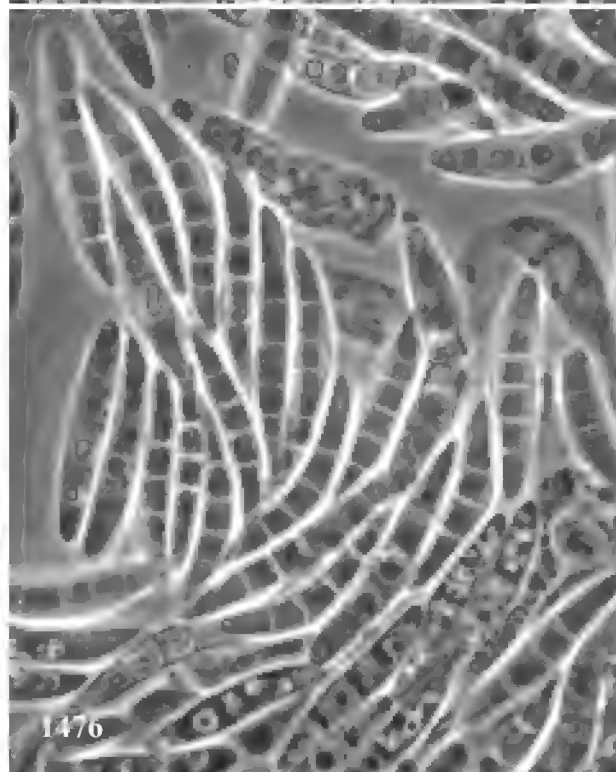
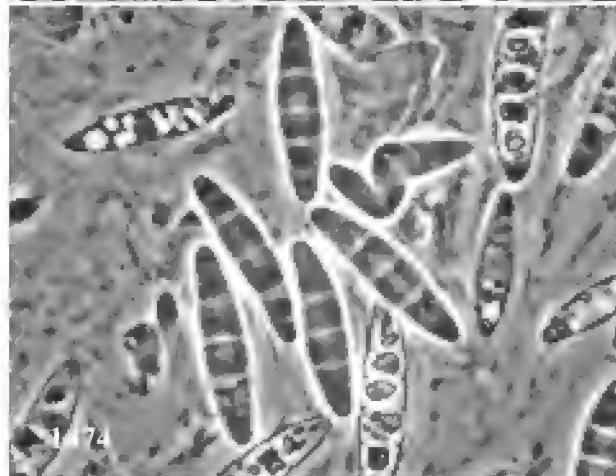
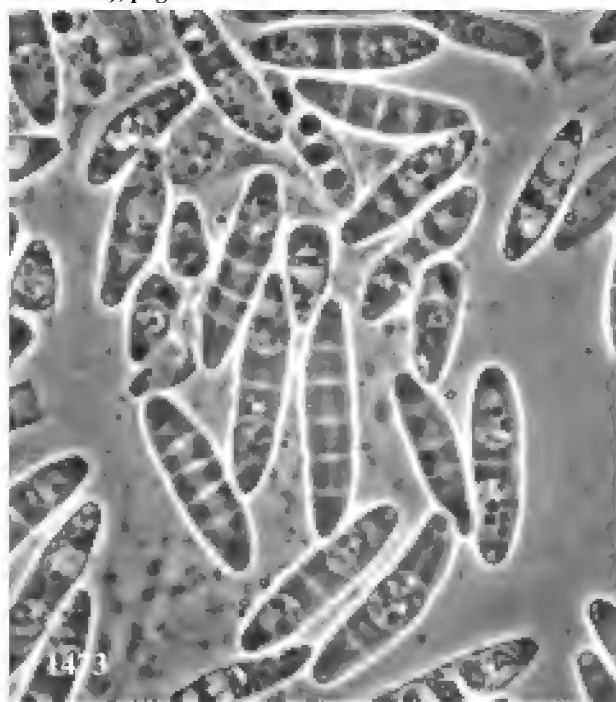
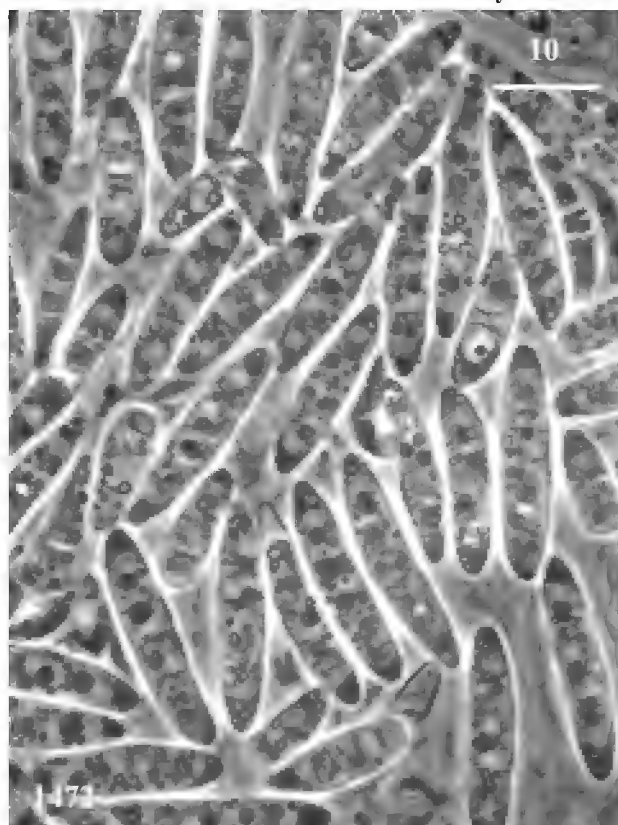
page 210 ( color plate )

1807 = Habit, perithecia on CMA. MFC-21079.









**1374 *Ophionectria trichospora*** ( Berkeley & Broome ) Saccardo, *Michelia* **1**: 323. 1878.

Anamorphosis: *Antipodium spectabile* Pirozynski (1974). *Canad. J. Bot.* **52**: 1142-1145.

**Descr** In b/c-medio peritheciis conidiophorisque. Hyphae vegetativae ramosae septatae non vel constrictae ad septa, 2-13.5  $\mu$  latae, laeves vel verrucosae, hyalinae ad brunneae.

*Ophionectria*-status: Perithecia dissita ad gregaria, superficialia, subiculis luteolis insidentia, ovoidea, 350-560  $\mu$  alta, 180-270  $\mu$  lata ( aggregatione cellularum superficie exclua ), ostiolo periphysato, rubro-aurantiaca, sub lente similia isdem *Nectriae*. Parietes superficie aggregationibus cellularum globosarum brunnearum, e duobus stratis compositi: exteriore strato textura angulari ad textura globulosa, ; interiore strato tenui hyalini, e cellulis longitudinaliter elongatis cylindricis composito. Asci fusiformes, unitunicati, octospori, maturitate deliquescentes. Ascosporae filiformes, 200-300  $\mu$  longae, 6.5-9.5  $\mu$  in parte latissima, utrinque versus angustatae, apice angustatae basi obtusae vel plusminusve truncatae, rectae curvae sigmoideaeve, maxime guttulae, obscure multiseptatae, in fasciculo paralleli vel interdum in fasciculo torto in asco dispositae, maturitate ejectae.

*Antipodium* status: Conidiophora macronematosa mononematosa, cylindrica, simplicia, rigida, 2-4-septata, laevia, frequenter una proliferatione percurrenti, 150-225  $\mu$  longa, supra basim 8.5-14  $\mu$  lata, sursum leviter angustascentia, prope apicem 6.5-11.0  $\mu$  lata, inferne pallide brunnea sursum subhyalina, vetustate pallide brunneascentia; cellulae conidiogenae ad conidiophorum terminaliter integratae, apice enteroblasticae-phialidicae, ad ores parietibus periclinalibus manifeste spissiscentibus. Conidia primo formata oboidea ad obclavata, apice plusminusve apiculata, basi obconico-truncatae protrudentia, 60-125 x 22.5-27.5  $\mu$ , 4-5-septata; conidia sequentia cylindro-fusiformia, 105-175  $\mu$  longa, in parte latissima 15-30  $\mu$ , (4-)5-6 septata, utrinque truncata, laevia. Conidia in catenas fragiles vel in fasciculorum disposita vel irregulariter aggregata, maturitate sed juventute hyalina alba in massa, vetustate aliquando brunneolascentia, pallide brunnea in massa.

Synanamorphosis: post germinationes ascosporarum phialides in hyphis germinantibus directe productae ( plusminusve similes *Lasiosphaeriae hirsutae* vel *L. ovinae* ). Phialides simplices, apice enteroblasticae-phialidicae; microconidia globosa ad pyriformia, 4-7 x 2.5-4.2  $\mu$ , basi truncata, laevia, incolorata.

**Hab** MFC-4P466, FC-4P709. Frondibus cariosis palmarum in fundo sylvarum densae; prope Colonia Angamos, Peru ( located at Peru-Brazil border of the Amazon ); July 1994.

**Ref** K. A. Pirozynski (1974), *Canad. J. Bot.* **52**: 1142-1145. // C. V. Subramanian & D. J. Bhat (1978), *Kavaka* **6**: 55-63. Conidium ontogeny and ascus development in *Ophionectria trichospora*. // A. Y. Rossman (1977), *Mycologia* **69**: 355-391. => *O. trichospora*: ascospores 180-250 x 6-10  $\mu$ . // A. Y. Rossman et al. (1999), *Stud. Mycol.* **42**: 159-161.

#### Photo

page 137

1478 = Perithecia taken out from b/c-medium.

1479, 1480 = Perithecia gently squashed.

1481, 1482, 1483 = Perithecial ostioles, side view and top view.

1484, 1485 = Peridium in surface view.

1486 = Peridium in section.

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1487, 1488 = Young asci. ( by phase contrast )

1489, 1490 = Near mature asci, gently pressed. ( by phase contrast )

1491, 1492 = Near mature asci, pressed.

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1493, 1494, 1495 = Apical parts of conidiophores, each with one percurrent proliferation. ( by phase contrast )

1496, 1497, 1498 = Conidiogenous cells, each with one percurrent proliferation. ( by phase contrast )

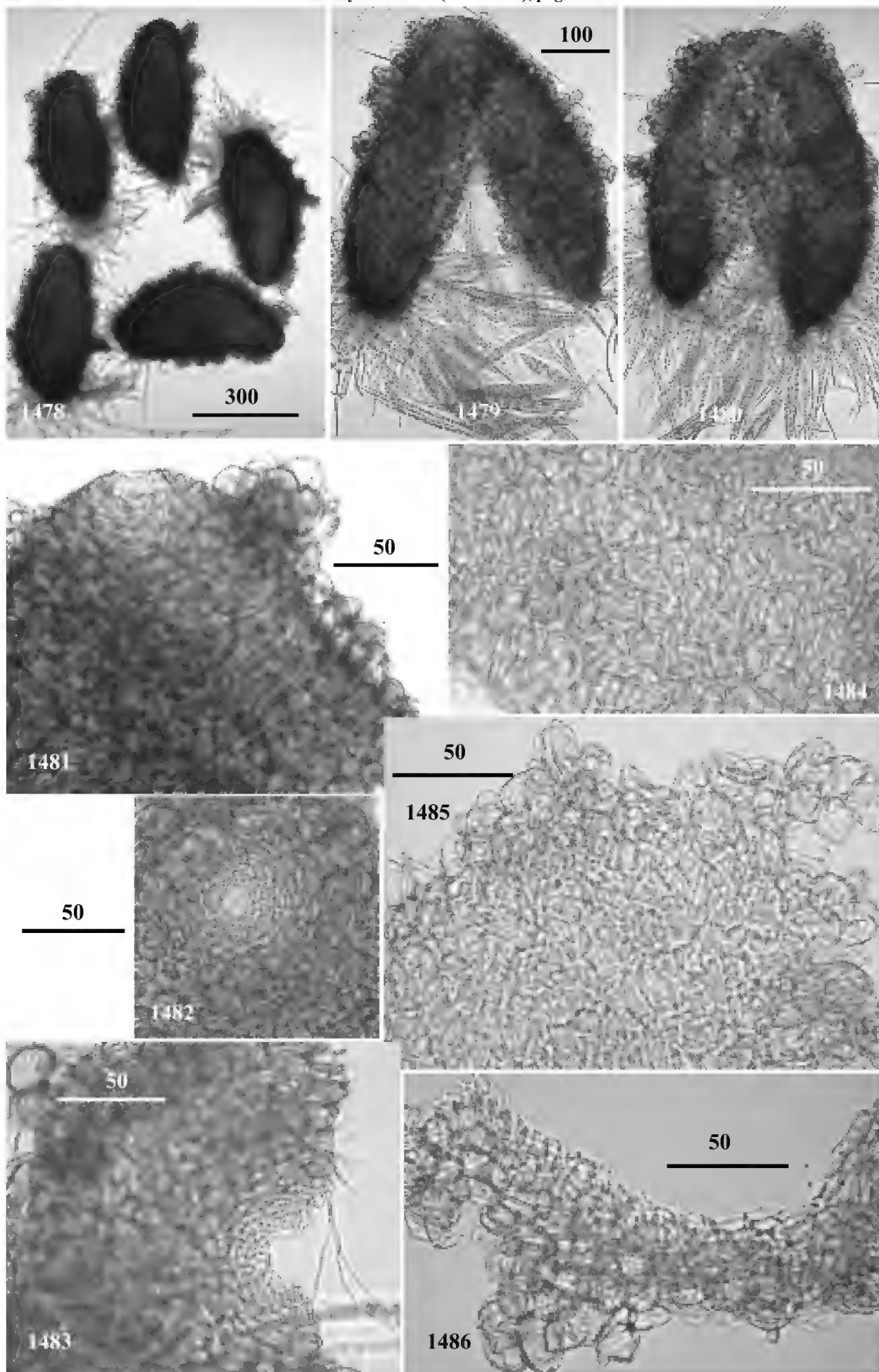
page 140

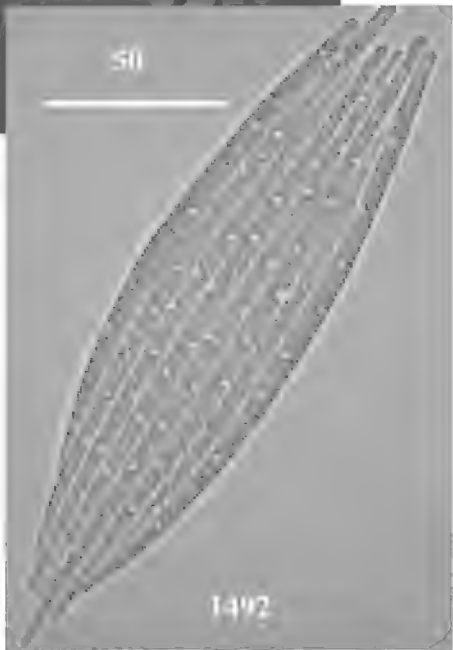
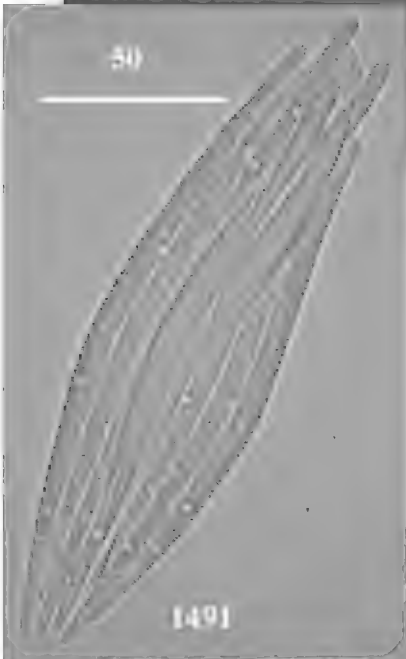
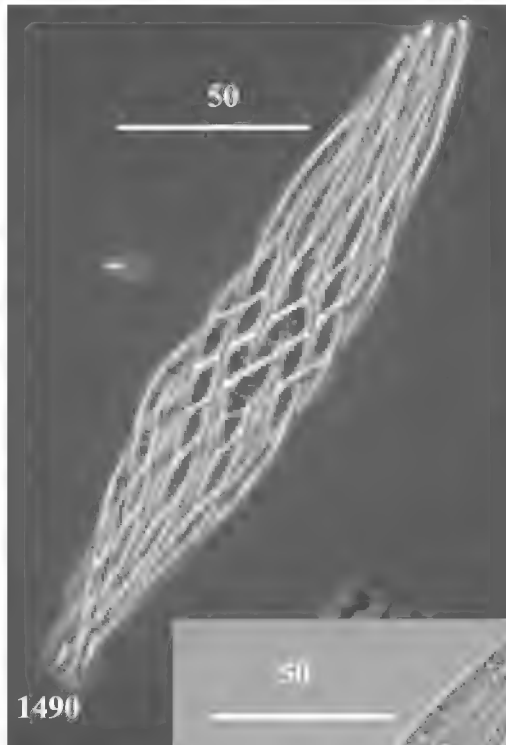
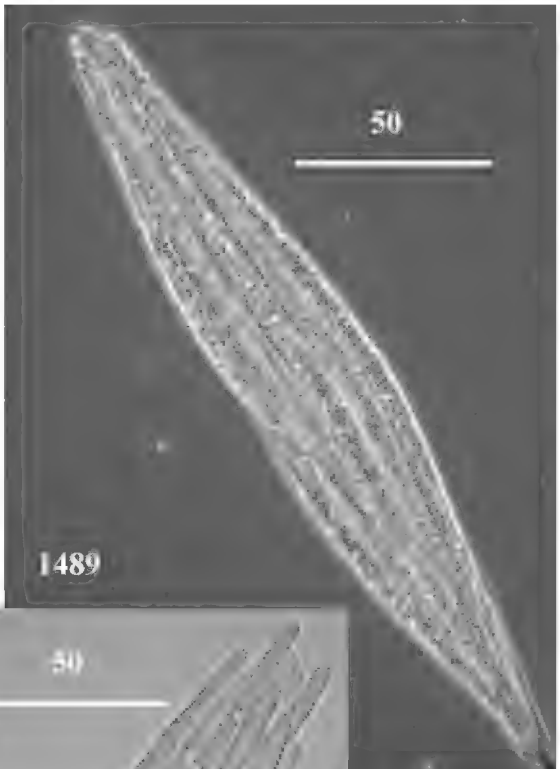
1499, 1500 = Conidia. ( by phase contrast )

page 210 ( color plate )

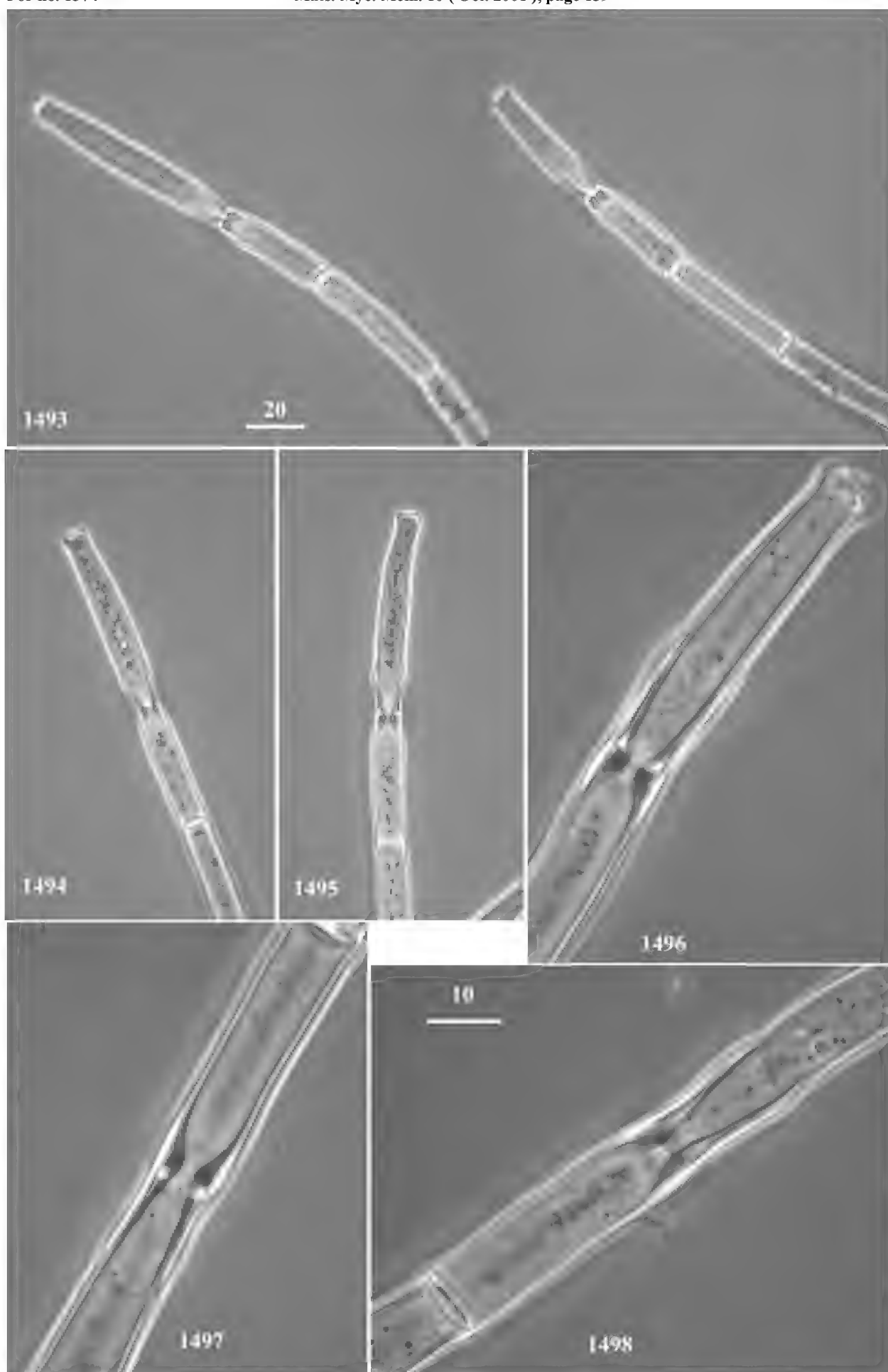
1808, 1809, 1810 = Perithecia on CMA.

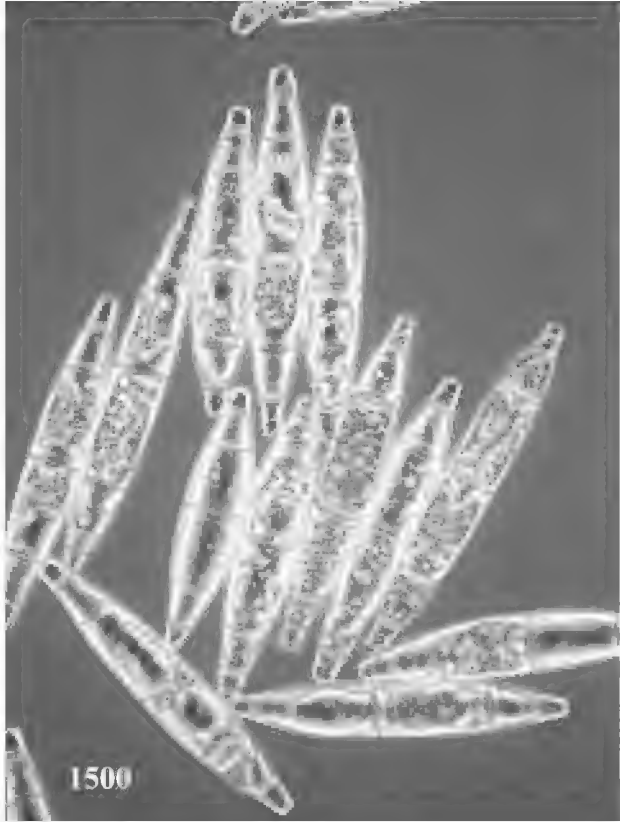
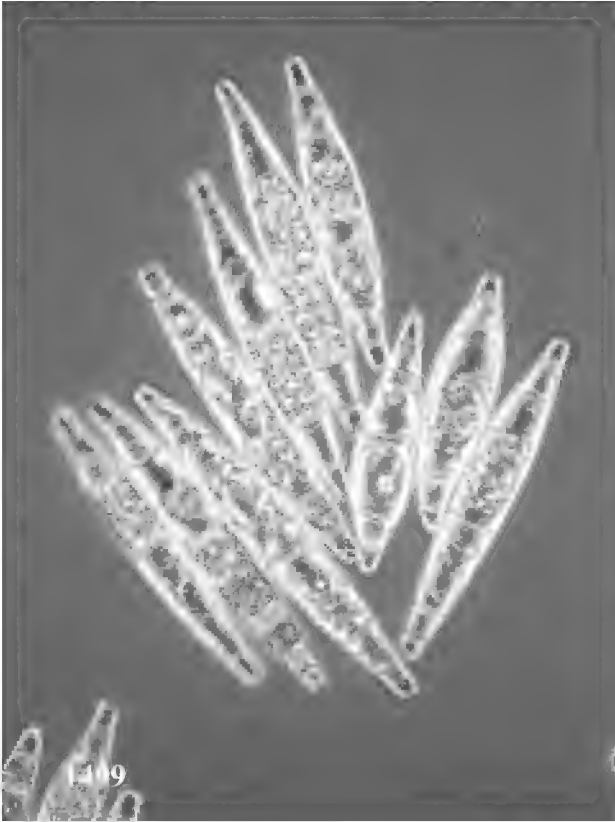












***Menisporopascus* gen. nov.**

Perithecia superficialia ad semi-immersa, globosa ad subglobosa, collo parvo conico apice ostiolato, atro-brunnea, sine setis sed parte aerea hyphis septatis laevibus fuscis sineosis vestita; parietes membranacei, externe vis. textura angulari, fusci, parte interiore pallescentes. Asci unitunicate, cylindrici pede brevi sinuato, oblique uniseriate octospori interdum tetraspori, apice apparato annulo. Paraphyses filamentosae, sinuatae, interdum ramosae, hyalinae. Ascosporae fabiformes ellipsoideae obvoideaeve, unicellulares vestitute interdum 1-septatae, laeves, hyalinae.

Anamorphosis: *Menisporopsis*. *Etym.*: *Menisporopascus* <= "*Menisporopsis* + ascus ( ascomycete )". Species typica postero sectione.

**1375 *Menisporopascus kobensis* sp. nov.**

Anamorphosis: *Menisporopsis kobensis* anam. sp. nov.

**Descr** *Menisporopascus*-teleomorphosis in CMA: Coloniae modice crescentes, effusae, luteo-brunneae, concentricis atro-brunneis circulis, quibus peritheciis fuscis dispersis, margine diffuso. Ascomata lentissime maturascentia ( per duos menses vel magnis ), superficialia ad sub-immersa, solitaria vel gregaria, globosa ad subglobosa, collo parvo conico apice ostiolato, (100-)120-250  $\mu$  diam., atro-fusca, sine setis sed parte aerea hyphis septatis rigidis brunneis sinuatis laevibus 100-275  $\mu$  longis 1.5-2.5  $\mu$  latis vestita, parte in agar immerseda hyphis usitatis hyalinis vestita; parietes membranacei, externe vis. textura angulari, brunnei, partim carbonacei secus septia, parte interiore pallescentes. Asci cylindrici pede brevi sinuato, oblique uniseriate octospori interdum tetraspori, 100-125  $\mu$  longi, 7-9  $\mu$  lati, apice apparato annulo. Paraphyses filamentosae, sinuatae, interdum ramosae, 2-3  $\mu$  latae, hyalinae. Ascosporae fabiformes ellipsoideae obovoideaeve, 12-18 x 4-6  $\mu$ , unicellulares laeves hyalinaeque, vestitute raro 1-septatae, laeves.

*Menisporopsis kobensis*-anamorphosis sp. nov. in b/c-medio: Coloniae effusae, hyphis aeriis sparsis, synnematibus dense dissetis. Synnemata unumquidque e seta una et fasciculo phialidibus compositum. Setae erectae rectae vel leviter curvae simplices rigidae crassitunicatae pauciseptatae, 250-275  $\mu$  longae, basi ad 7.5-8.8  $\mu$  inflatae, supra basim 6-6.3  $\mu$  latae, apicem versus fere non angustae, apice obtusae, atro-brunneae apice pallidiores. Conidiophora generaliter desunt. Phialides circum setam fasciculatae ( i. e. more *Menisporopsis theobromae*, non more *Menisporopsis novae-zelandiae* ), inferne arcte contiguae, superne liberatae, extrinsecus flexae, cylindricae, 75-90  $\mu$  longae, inferne 2.5-3  $\mu$  latae, sursum leviter ad 3-3.5  $\mu$  inflatae, interdum inferne 1-septatae ( i. e. interdum conidiophora cylindrica praesentia ), laeves, inferne pallide brunneae, superne hyalinae, apice leviter angustatae, enteroblasticae-phialidicae, ad orem parietibus periclinalibus clare spissescens, apice collo minuto. Conidia allantoidea, unicellularia ( vetustate raro 1-septata ), calce basali non conspicua, laevia, (19-)22.5-30(-32) x 4-5  $\mu$ , hyalina, pallide crenea in massa, utrinque una setula 6-10  $\mu$  longa, setula basali exogena. Perithecia nulla.

*Menisporopsis kobensis*-anamorphosis sp. nov. in CMA: Heteromorphicus vel degeneratus; synnemata typica ( ut supra in b/c-medio descripta ) rariora; synnemata sine setis raria; phialides singulatim dispersae prominentes: conidia frequenter sine setulis vel setulis brevissimis.

*Etym.*: *kobensis* <= type locality of this species is "Kobe", Japan.

**Hab** E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Kobe Municipal Arboretum, Kobe, Japan; March 2000. **Typus**: cultura b/c-medio exsiccata, MFC-21066.

**Mem** *Menisporopsis kobensis* a speciebus cognitis conidiis magnioribus differt.

**Ref** K. M. Tsui et al. (1999), Mycol. Res. **103**: 148-152. => *Menisporopsis multisetulata* sp. nov., p. 150, 152. / p. 152: key to six spp.; *profusa*, *novae-zelandiae*, *pleiosetosa*, *theobromae*, *pirozynskii*, and *multisetulata*. // G. M. Siboe, P. M. Kirk, & P. E. Cannon (1999), Mycotaxon **73**: 283-302. p. 294. =>

The conidial sizes of currently accepted eight species of *Menisporopsis* are:

*Menisporopsis ludoviciana* (= *Chaetopsina ludoviciana*)

*Menisporopsis profusa* = conidia 12-15 x 2-2.5  $\mu$ .

*Menisporopsis novae-zelandiae* = conidia 15-18 x 2.5-3  $\mu$ .

*Menisporopsis priozynskii* = conidia 17-20.5 x 2.5-3.5  $\mu$ .

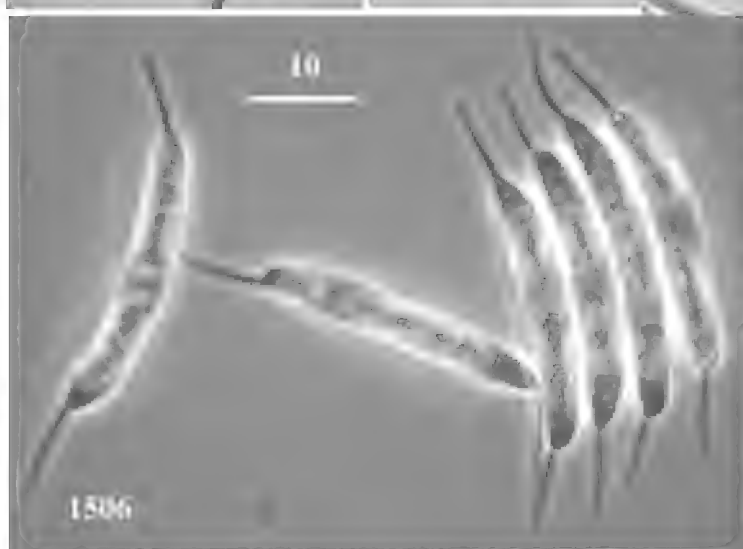
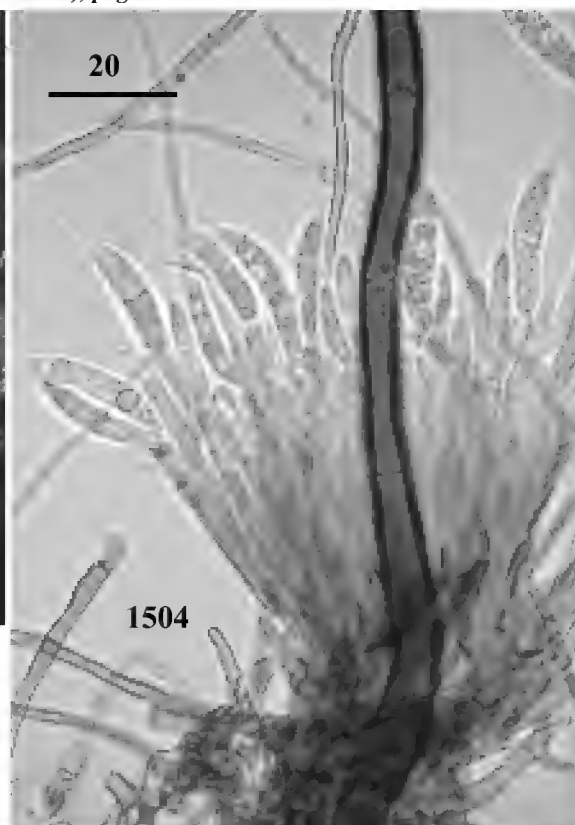
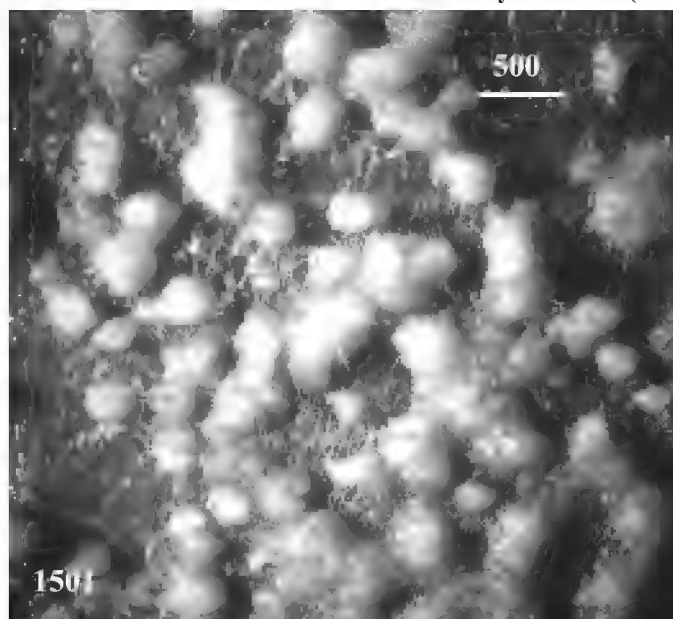
*Menisporopsis theobromae* = conidia 14-18 x 2-3  $\mu$ .

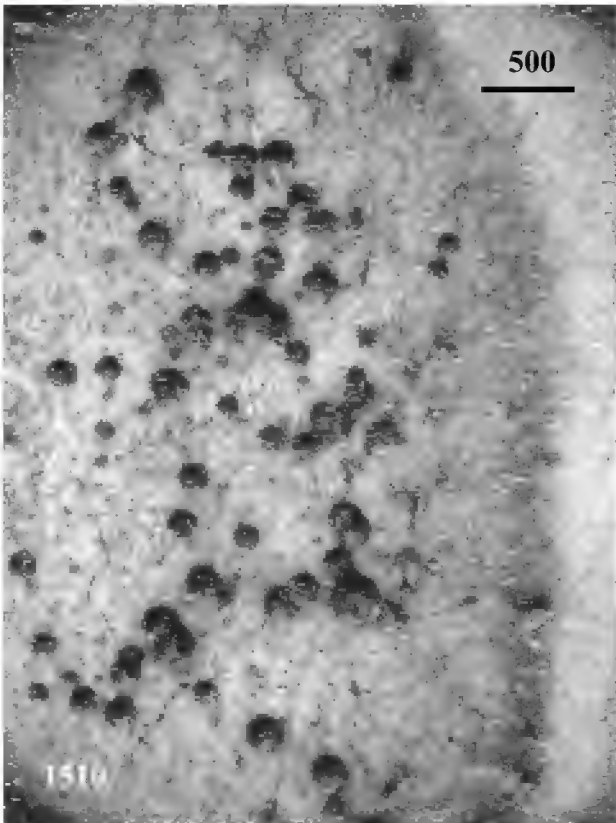
*Menisporopsis pleiosetosa* = conidia 12-18 x 4-5  $\mu$ .

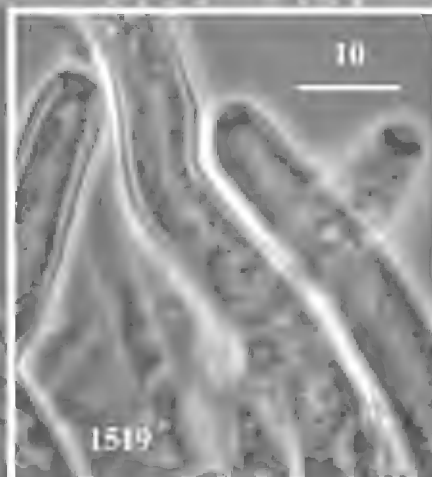
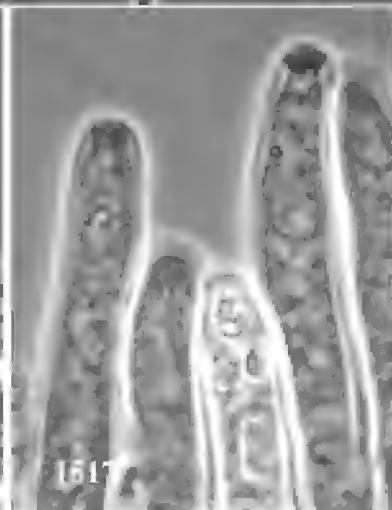
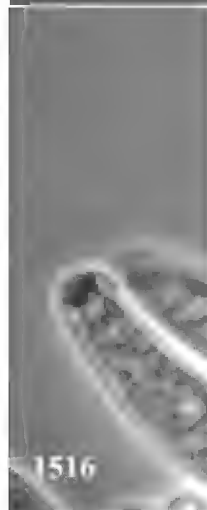
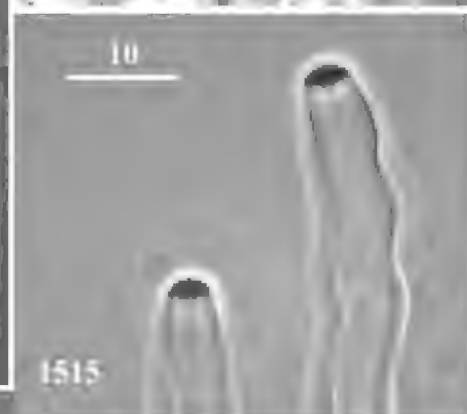
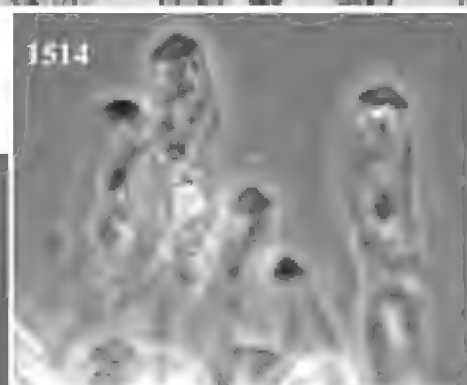
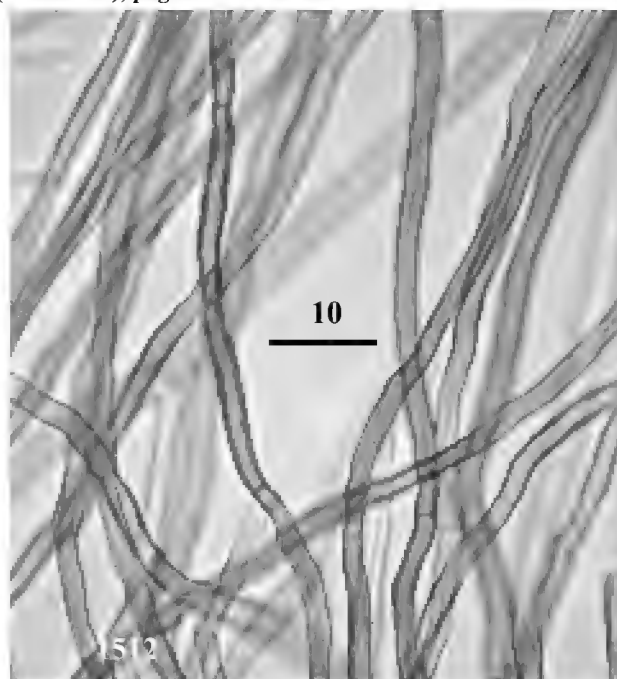
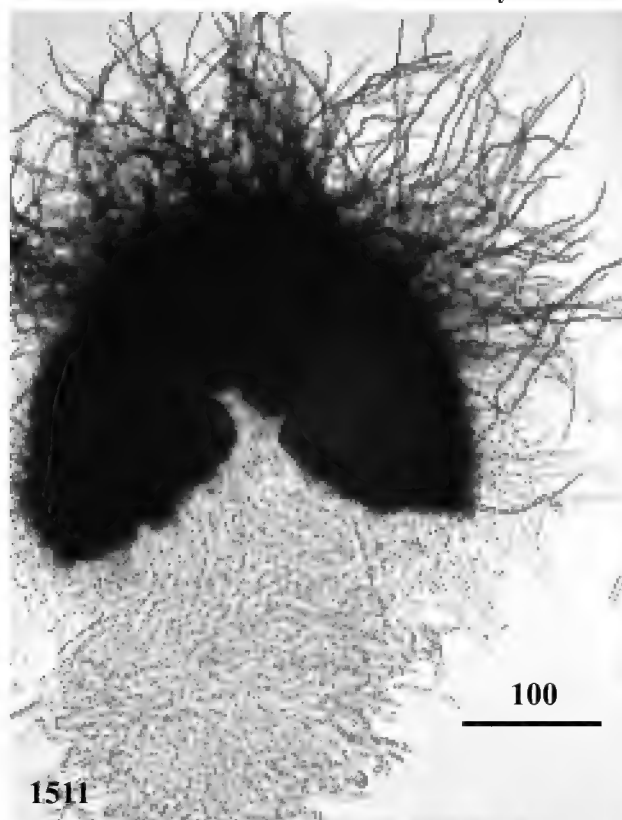
*Menisporopsis trisetulosa* = conidia 12-20 x 2  $\mu$ .

*Menisporopsis multisetulata* = conidia 12-18 x 2.5-4  $\mu$ .

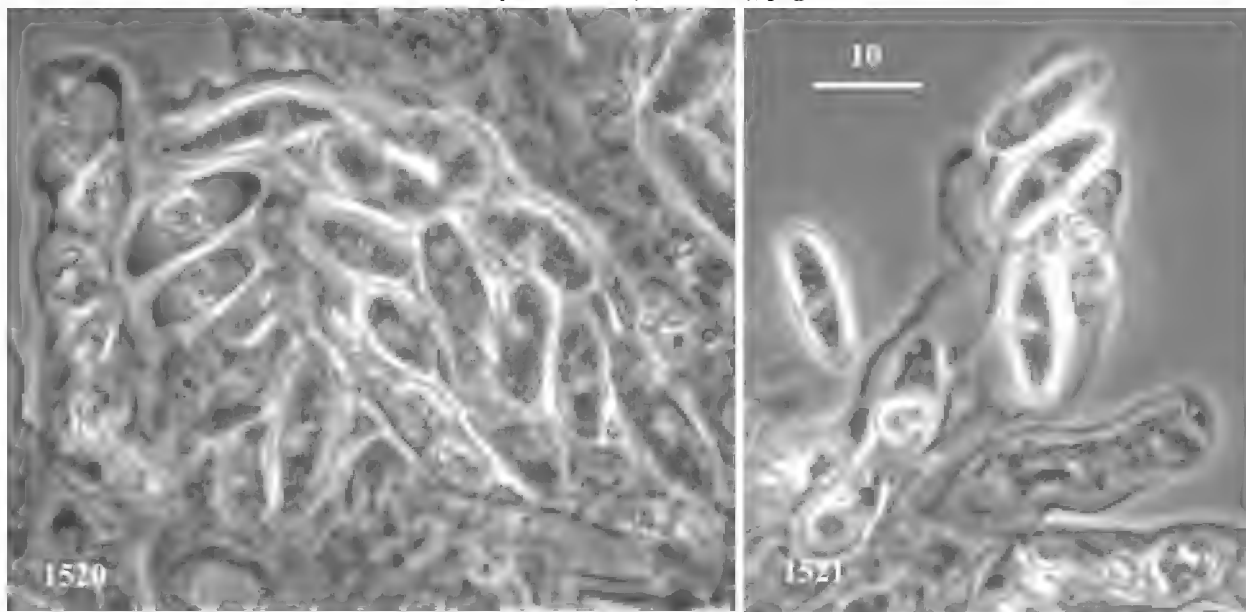
Continue to page 145.









**Photo**

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1501 = Habit on b/c-medium. Masses of conidia covering synnemata.

1502, 1503, 1504, 1505 = Synnemata.

1506 = Conidia. ( by phase contrast )

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1507, 1508 = Synnemata. ( by phase contrast )

1509 = Conidia. ( by phase contrast )

1510 = Ascomata on CMA, after two months.

page 144

1511 = Ascoma, gently squashed.

1512 = Brown hairs on aerial part of ascoma.

1513 = Young asci and paraphyses. ( by phase contrast )

1514, 1515, 1516, 1517, 1518, 1519 = apices of asci. ( by phase contrast )

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1520, 1521 = Ascospores. ( by phase contrast )

***Chaetosphaerides* gen. nov.**

Hyphae vegetativae ramosae, septatae, hyalinae, albae ad pallide coloratae in massa. Perithecia superficialia, dissita ad gregaria, obpyriformia ad obclavata, atrobrunnea, non-setifera, collo cylindrico ostiolato periphysato; paries membranaceus, atrobunneus. Asci unitunicati, fasciculati, cylindrici, pede brevi angusto, apice annulato, octospori. Paraphyses filiformes, simplices, septatae, laeves, hyalinae, maturitate deliquescentes. Ascosporae imbricate uniseriatae vel irregulares, cylindricae, 3-septatae, laeves, subhyalinae, pallide brunneae mucosae in massa, ad ores collorum aggregatae. Anamorphoses sunt *Ramichloridium* spp. vel hyphomycetes similes. **Etym.:** *Chaetosphaerides* <= resemble to *Chaetosphaeria*.

**1376 *Chaetosphaerides ramichloridifera* sp. nov**

**Descr** Coloniae in b/c-medio tarde effusae, arachnoideae, pallide aurantiacae, ascomatibus ateris dispersis. Hyphae vegetativae ramosae, septatae, 0.7-2  $\mu$  latae, hyalinae, albae ad pallide aurantiacae in massa. Perithecia superficialia, dissita ad gregaria, obpyriformia ad obclavata, atrobrunnea, non-setifera; corpora 150-540  $\mu$  in diam., colla cylindrico 200-550  $\mu$  longo 75-125  $\mu$  lato ostiolato periphysato; paries atrobunneus, tenuis, membranaceus, ex partibus duabus compositus; pars exterior est unistrata intricata textura, quae hyphis ramosis septatis fuscis 2-3.5  $\mu$  latis composita; pars interior est textura angularis, frequenter cellulis extimis secus septa parte carbonaceis, modice brunnea introsum ad subhyalina. Asci unitunicati, fasciculati, anguste cylindrici, pede brevi angusto, apice annulato manifesto, 162-175  $\mu$  longi 10-12.5  $\mu$  lati, octospori. Paraphyses filiformes, simplices, septatae, parte inferiore 2.5-3.5  $\mu$  latae, parte superiore 1.5-2  $\mu$  latae, laeves, hyalinae, maturitate deliquescentes. Ascosporae in asco partim imbricate uniseriatae, oblongae, praecipue leviter curvae, interdum rectae, fere 3-septatae, raro 1-septatae, in quaque cellula generatim cum una guttula, (20-)22-30 x 5-6  $\mu$ , laeves, subhyalinae, pallide brunneae mucosae in massa, ad ores collorum aggregatae.

Anamorphosis est *Ramichloridium* sp., quae abundanter formata. Conidiophora generatim cellulas conidiogenas reducta. Cellulae conidiogenae e hyphis vegetativis hyalinis, simplicibus funiculosis repentibus aeriisve lateraliter orientes, breves conicae cylindricaeve, usque ad 13  $\mu$  altae, basi 2-4  $\mu$  latae, primum apice per dentem minutem monoblasticae, tum sympodialiter repetite proliferatae, postremo capitulo conidiifero polydenticulato leviter inflato formatae. Conidia praecipue oblonga ad cylindro-clavata, 0-1-septata, 4-14 x 2.5-4  $\mu$ , interdum globosa ad subglobosa 3-4 x 2.5-3  $\mu$ , laevia, hyalina.

Coloniae in CMA tarde crescentes, post tres hebdomates ca. 10 mm. diam., hyphis aeriis sparsis, modice aurantiacae, hyphis aeriis pauperis, ad et circum inoculas ascomatibus ateris, margine diffusae. Ascomata sub-superficialia vel excepto collo immersa. **Etym.:** *ramichloridifera* <= "having *Ramichloridium*" anamorph.

**Hab** E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Kobe Municipal Arboretum, Kobe, Japan; Nov. 1999. **Typus:** cultura b/c-medio exsiccata, MFC-21085.

**Mem** For the identification of this fungus *Ceratosphaeria* Niessl (1876) and *Chaetosphaeria* Tulasne (1863) are taken into consideration. // For designation of the anamorph, genus *Ramichloridium* de Hoog [ t. sp.: *R. apiculatum* ( Miller et al. 1957 ) de Hoog, 1977 ] was chosen instead of *Sporothrix* [ t. sp.: *S. schenckii* Hektoen & Perkins, 1900, anamorph of *Ceratocystis stenoceras* ( Robak ) C. Moreau ]. It is known that many spp. of *Ophiostoma* Syd. ( t. sp.: *O. piliferum* ) have *Sporothrix* - anamorphs.

**Ref** M. Tsuda & A. Ueyama (1977), Trans. mycol. Soc. Japan **18**: 413-427. Studies on the descriptions and specimens of genus *Ceratosphaeria* Niessl. ( in Japanese except tables and photo-plates ). => Genus *Ceratosphaeria* Niessl [ t. sp.: *Sphaeria* ( *Ceratostoma* ) *lampadophora* Berkeley & Broome ] is considered as a medley of different taxa, a form genus. // M. E. Barr & J. L. Crane (1979), Canad. J. Bot. **57**: 835-837. => In *Chaetosphaeria* spp. teleomorphs are similar each other, but their anamorphs are different, therefore the conidial state are of prime utility in recognizing species. // K. D. Hyde, T.-K. Goh et al. (1999), Mycol. Res. **103**: 1423-1439. => In *Chaetosphaeria*, the anamorphs are, when known, enteroblastic-phialidic in approx. eight different genera.

**Photo**

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1522 = Habit. Ascomata on CMA.

1523 = Habit. Ascomata on b/c-medium.

1524 = Tip of ascoma.

1525 = Outermost layer of peridium in body part, showing *textura intricata*.

1526 = Outermost layer of peridium in neck part, showing *textura intricata*.

1527 = Outer layer of peridium in body part, showing partly carbonized *textura angularis*.

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1528 = Outer layer of peridium in body part, showing *textura angularis*.

1529 = Premature asci and paraphyses. ( by phase contrast )

1530 = Middle parts of asci. ( by phase contrast )

1531 = Upper parts of young asci. ( by phase contrast )

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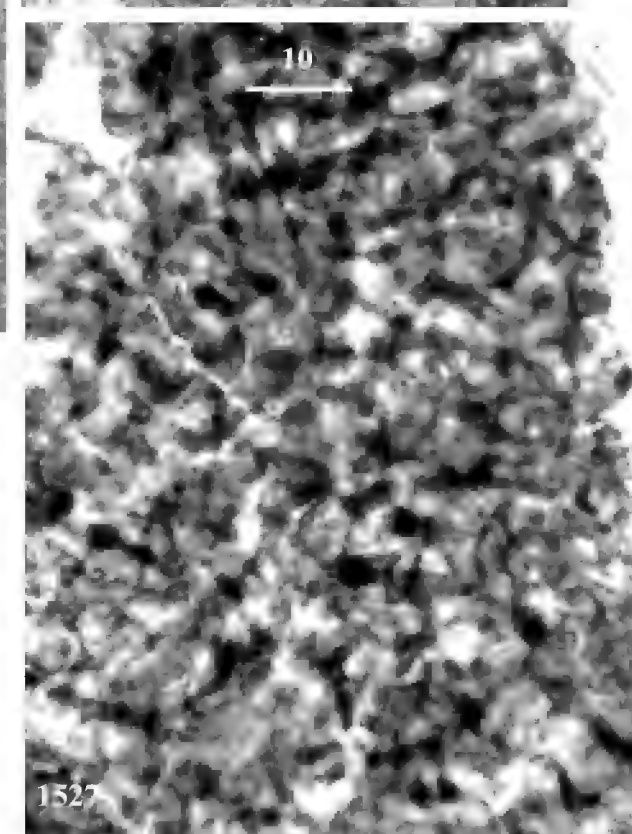
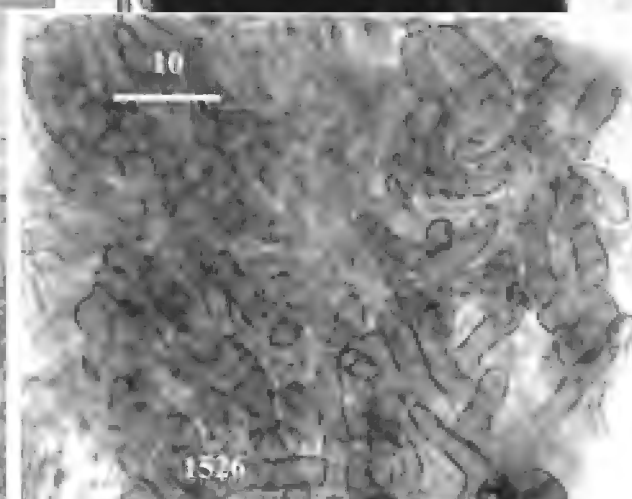
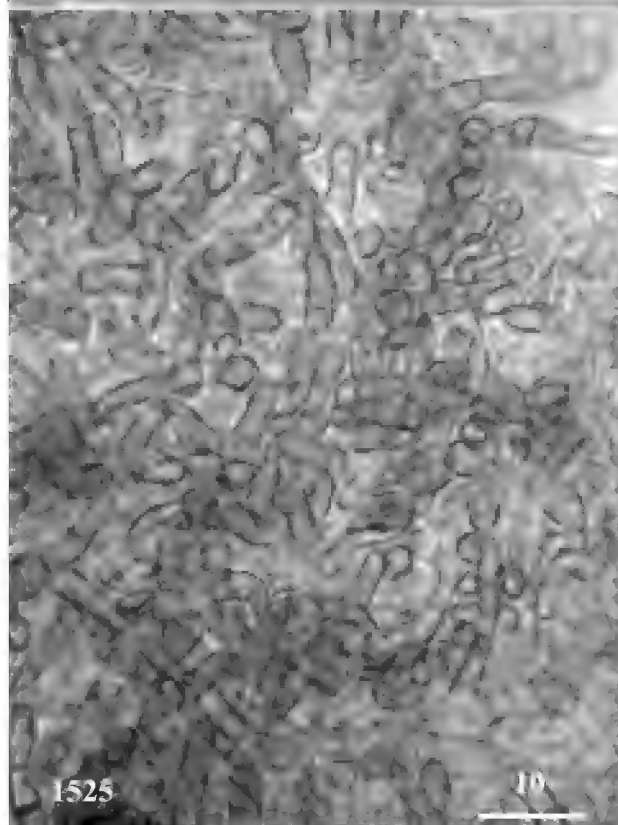
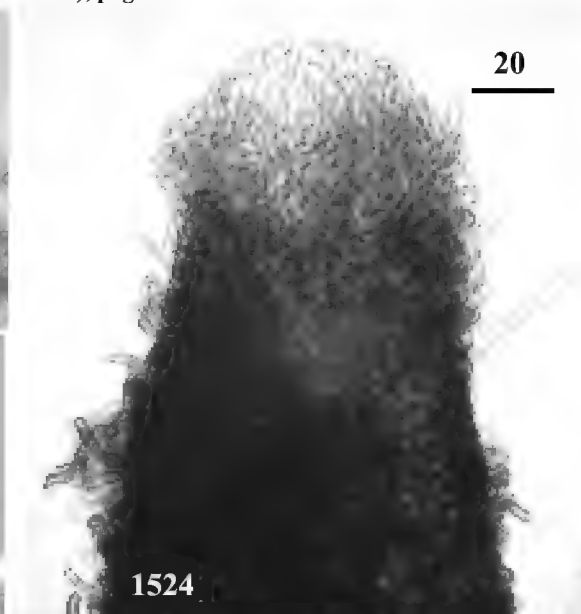
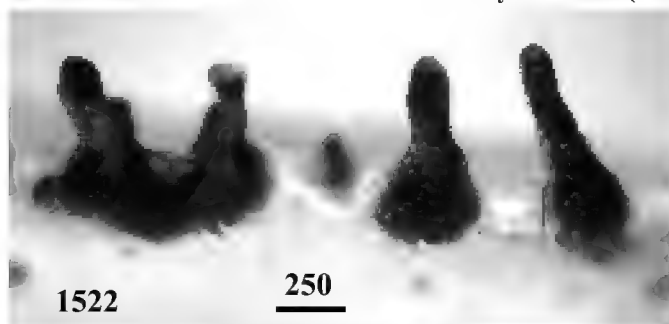
1532, 1533, 1534, 1535 = Upper parts of asci. ( by phase contrast )

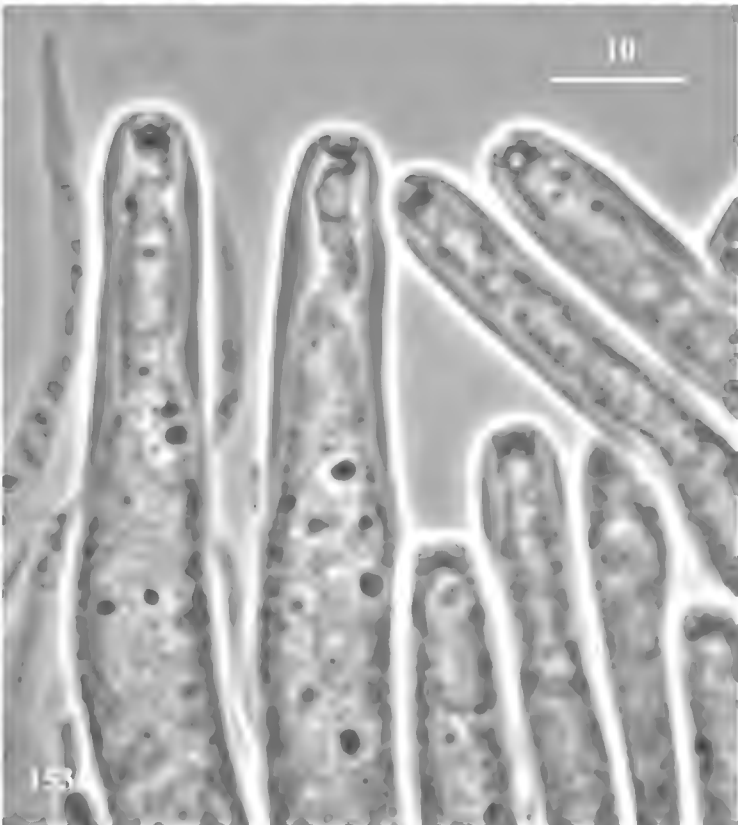
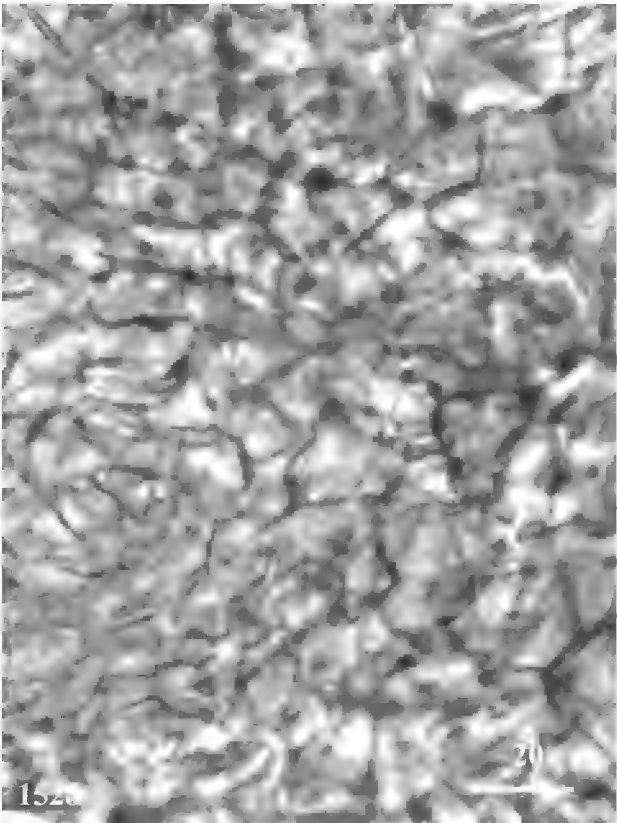
1536, 1537, 1538 = Ascospores. ( by phase contrast )

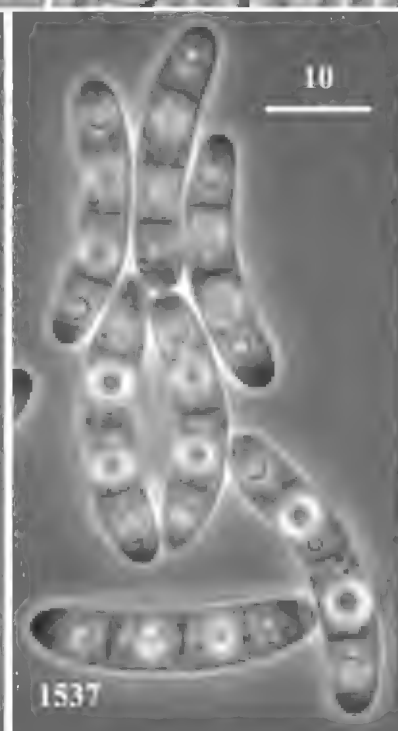
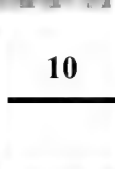
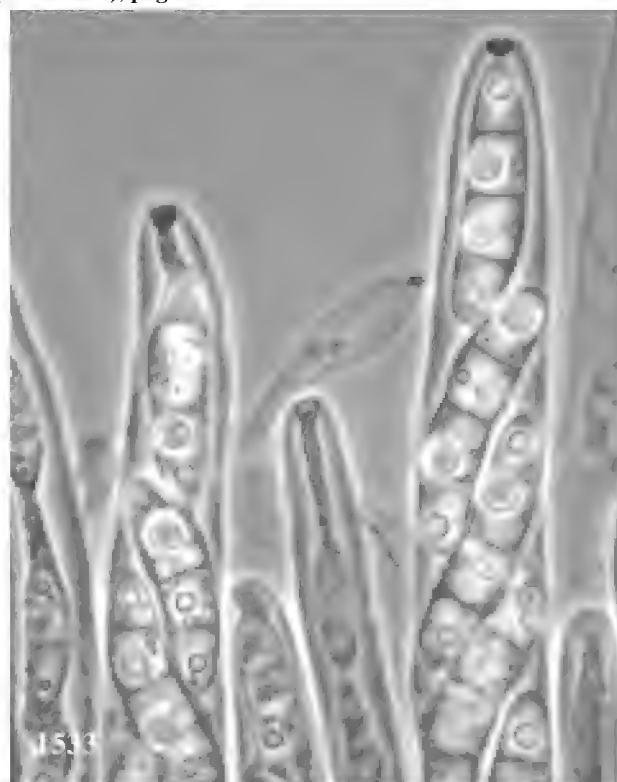
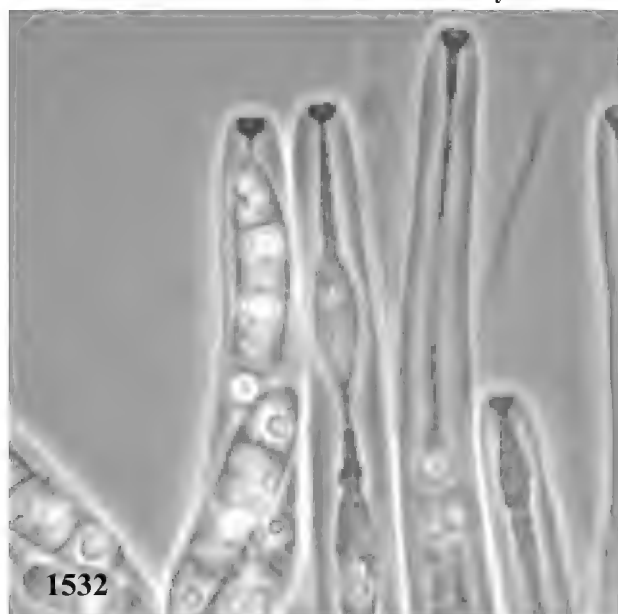
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1539, 1540, 1541, 1542, 1543, 1544, 1545, 1546 = Conidigenous cells on CMA. ( by phase contrast )

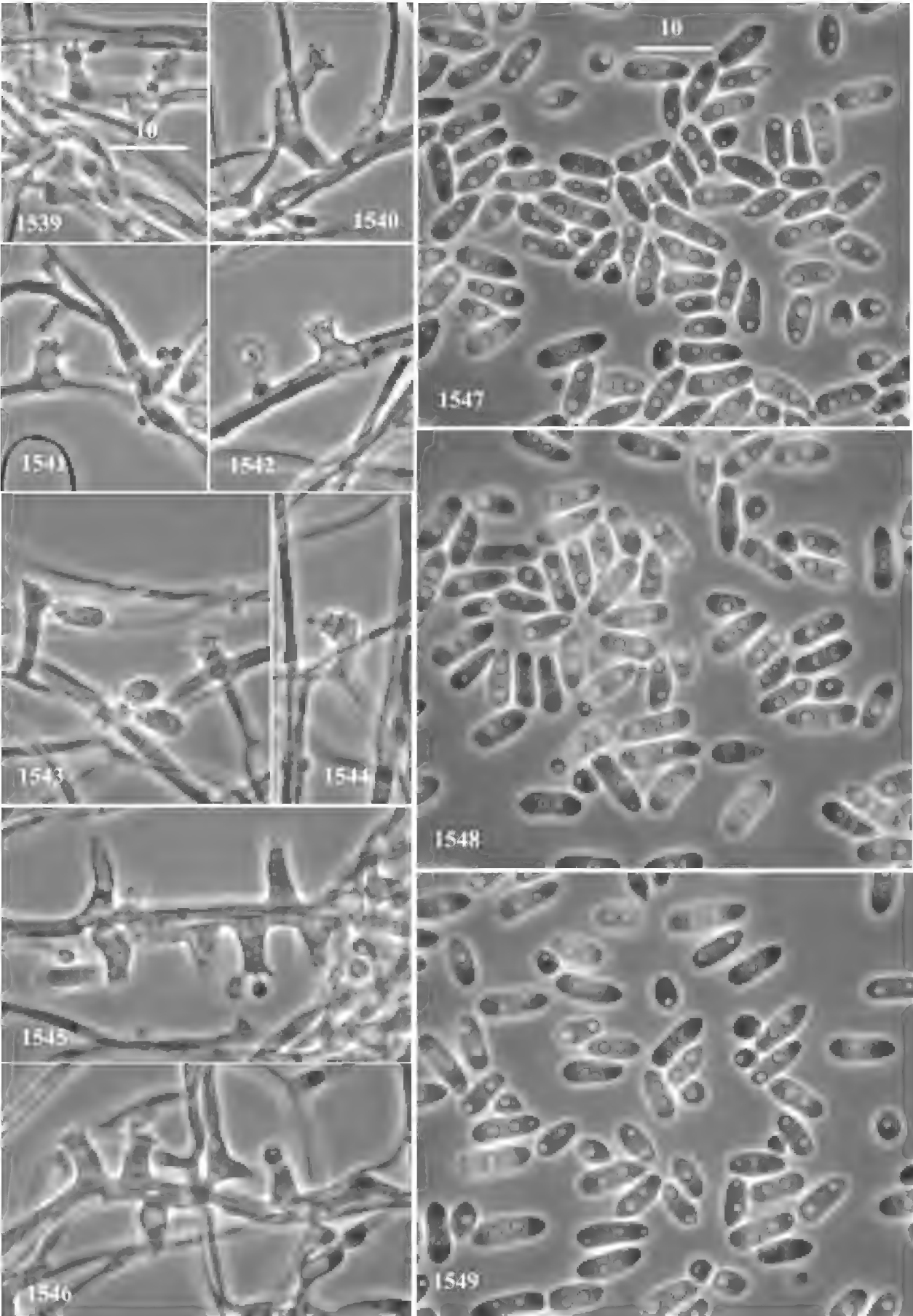
1547, 1548, 1549 = Conidia. ( by phase contrast )











***Apogaeumannomyces* Matsushima gen. nov.**

Perithecia dispersa vel gregaria, superficialia, globosa ad obpyriformia, atera, rostro parvo ostiolato periphysibus, nuda vel pilis longis brunneis: paries pseudoparenchymaticus, atro-brunneus intrinsecus subhyalinus. Asci unitunicati, ad basim fasciculati, cylindro-fusiformes, pede brevi, apice annulati, praecipue octospori interdum tetraspori. Paraphyses filiformes, hyalinae, maturitate contento evacuantes. Ascospores filiformes, in asco fasciculo paralleli, multi-septatae, laeves, hyalinae. Anamorphosis est *Cercosporula* vel hyphomycetes similis blastogenus. Similis *Gaeumannomyces*, quibus anamorphosis ubi cognitus *Phialophora* vel hyphomycetes similis phialidicus. **Etym.** <= apo away from + *Gaeumannomyces*.

**1377 *Apogaeumannomyces perplexus* sp. nov.**

Anamorphosis: *Cercosporula perplexa* anam. sp. nov. / = *Cercosporula* sp. MFC-3014, in Icones Microfungorum a Matsushima Lectorum, 1975, p. 24.

**Descr** Coloniae in b/c-medio diffusae, brunneae, hyphis aeriis pauperis, peritheciis atheris abundantibus solitariis vel gregariis. Perithecia superficialia, globosa ad obpyriformia, 230-400  $\mu$  in diam., atera, rostro parvo conico ostiolato periphysibus hyalinis, nuda vel pilis plusminusve rigidis simplicibus longis septatis laevibus brunneis oblecta: parietes 25-35  $\mu$  crassi, superficie scabri ob cellulas extimas fuscas subglobosas ad obpyriformes partim carbonaceas secus septa, intra aliquot stratis ab externe vis. textura angulari, in sectione cellulis complanatis constantes, stratis exterioribus brunneis intrinsecus subhyalinis. Asci unitunicati, ad basim fasciculati, cylindro-fusiformes, pede brevi, 135-225  $\mu$  longi, circum medium parte latissima 15-22.5  $\mu$ , apice manifeste annulati, in fasciculo praecipue octospori interdum tetraspori. Paraphyses filiformes, simplices, 2-4-septatae, parte basali 1.5-2  $\mu$  latae, sursum ad 6-8  $\mu$  inflatae, tenuitunicatae, hyalinae, fragiles, maturitate contento evacuantes. Ascospores filiformes, praecipue leviter curvae, (94-)125-150(-175)  $\mu$  longae, circa medio (4.5-)5.5-6.5  $\mu$  latae, (10-)11(-12)-septatae, utrinque versus leviter attenuatae, basim versus attenuatiora, apice truncatae 4  $\mu$  latae, basi rotundatae, laeves, hyalinae, salmoneae in massa, maturitate valide ejectae.

Anamorphosis: *Cercosporula perplexa* anam. sp. nov. Conidiophora perpendiculariter e hyphis vegetatibus oriunda, mononematosa, macronematosa, cylindrica, simplicia vel parce ramosa, septata, 45-125  $\mu$  longa 2.5-5  $\mu$  lata, laevia, brunnea; cellulae conidiogenae terminliter ad conidiophora integratae, cylindricae, 12.5-37.5  $\mu$  longae, 2.5-4  $\mu$  latae, pallide brunneae, loci conidiogeni blastogeni per elongationes sympodiales acropleurogeni, frequenter irregulariter flexi, raro enteroblastici-phialidici, hic denticulis ille collarulis. Conidia filiformia, recta vel curva, (17-)25-35  $\mu$  longa, 1.0-2.0  $\mu$  lata, utrinque versus leviter angustata, continua, hyalina, apicali parte conidiophori fasciculo albido disposita.

Coloniae in CMA effusae, fuscae, parte centrali laxae coactae, margine lato submerso. Hyphae vegetativae brunneae septatae 2.5-5  $\mu$  latae. Perithecia ad et circum PDA-inoculas formata.

Anamorphosis abundanter formata. Culturae in ascomate cito sterilascentes. **Etym.** *perplexus* <= "confused", since the conidial ontogeny is mainly blastic but occasionally phialidic.

**Hab** MFC-1P446, MFC-1P526. Fronde carisa palmarum, in fundo sylvae densae palmosae; Tambopata Reserve, Madre de Dios, Peru; October 1990. **Typus**: cultura b/c-medio exsiccata, MFC-1P446.

**Ref** J. A. von Arx & D. L. Olivier (1952). The taxonomy of *Ophiobolus graminis* Sacc. Trans. Br. mycol. Soc. **35**: 29-33. => p. 32. *Gaeumannomyces* J. A. von Arx & D. L. Olivier gen. nov., T. sp.: *G. graminis* (Sacc.) J. A. von Arx & D. L. Olivier. // J. Walker (1980), Mycotaxon **11**: 1-129. *Gaeumannomyces*, *Linocarpon*, *Ophiobolus* and several other genera of scolecospored ascomycetes and *Phialophora* conidial states, with a note on hyphopodia. // *Cercosporula* G. Arnaud (1954), Bull. Soc. mycol. France **69**: p. 290. Type species: *C. crassiuscula* sp. nov.; another species: *C. corticola* sp. nov., in p. 290, figs. in p. 289. (non rite publ.) // *Cercosporula* sp. MFC-3014, in Icones Microfungorum a Matsushima Lectorum, 1975, p. 24: conidia 18-28(-35) x 1-1.5  $\mu$ . // *Cercosporula intermedia* Matsushima (1995), in Mats. Myc. Mem. **8**, p. 16, no. 1186, is similar to the anamorph of this new species, in the former the conidia are 14-23 x 1.0-1.5  $\mu$ .

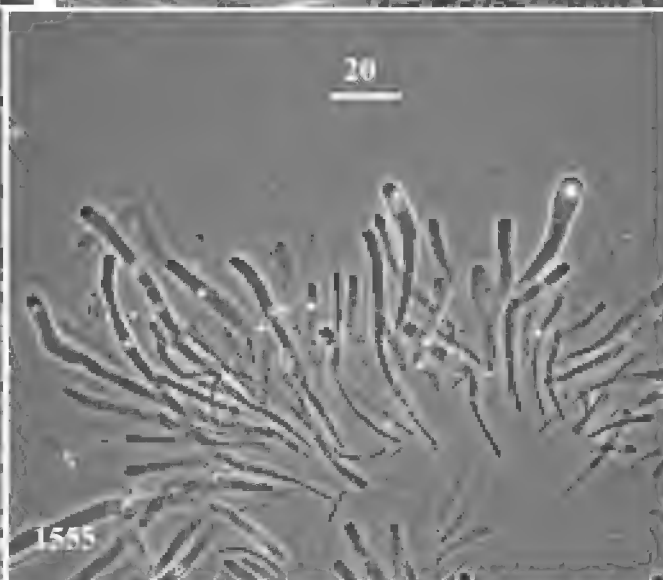
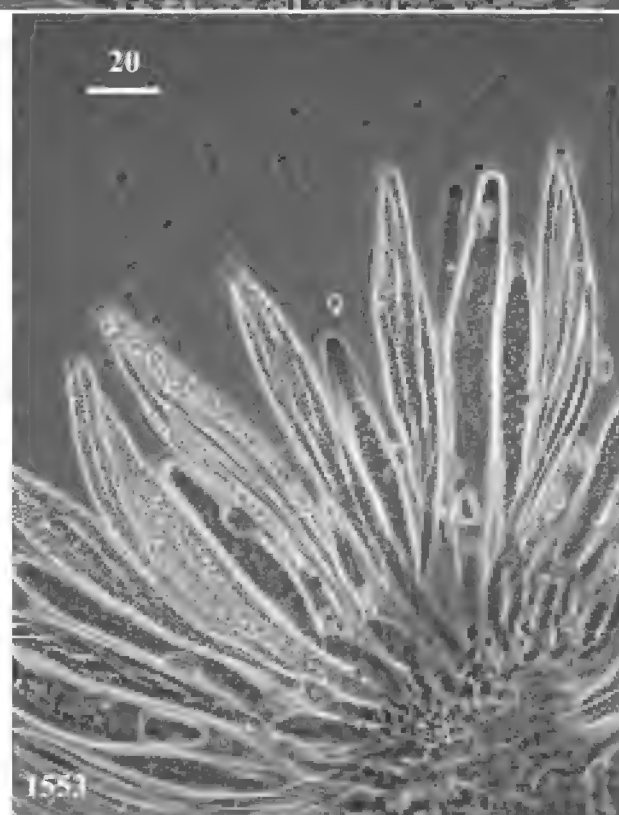
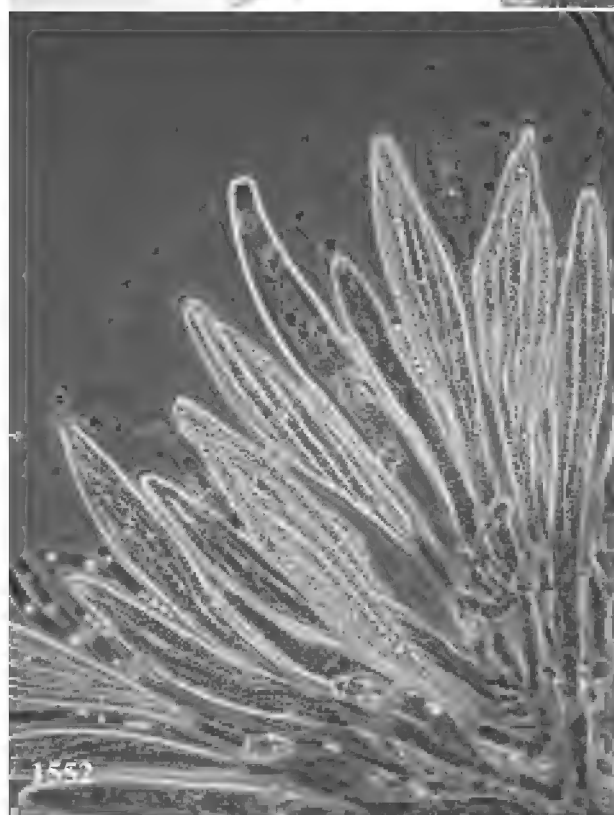
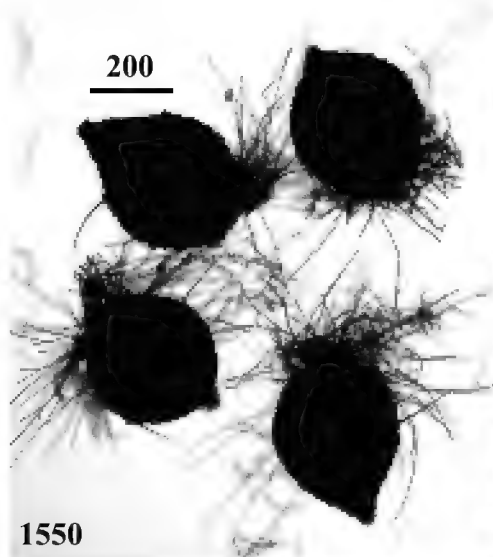
**Photo**

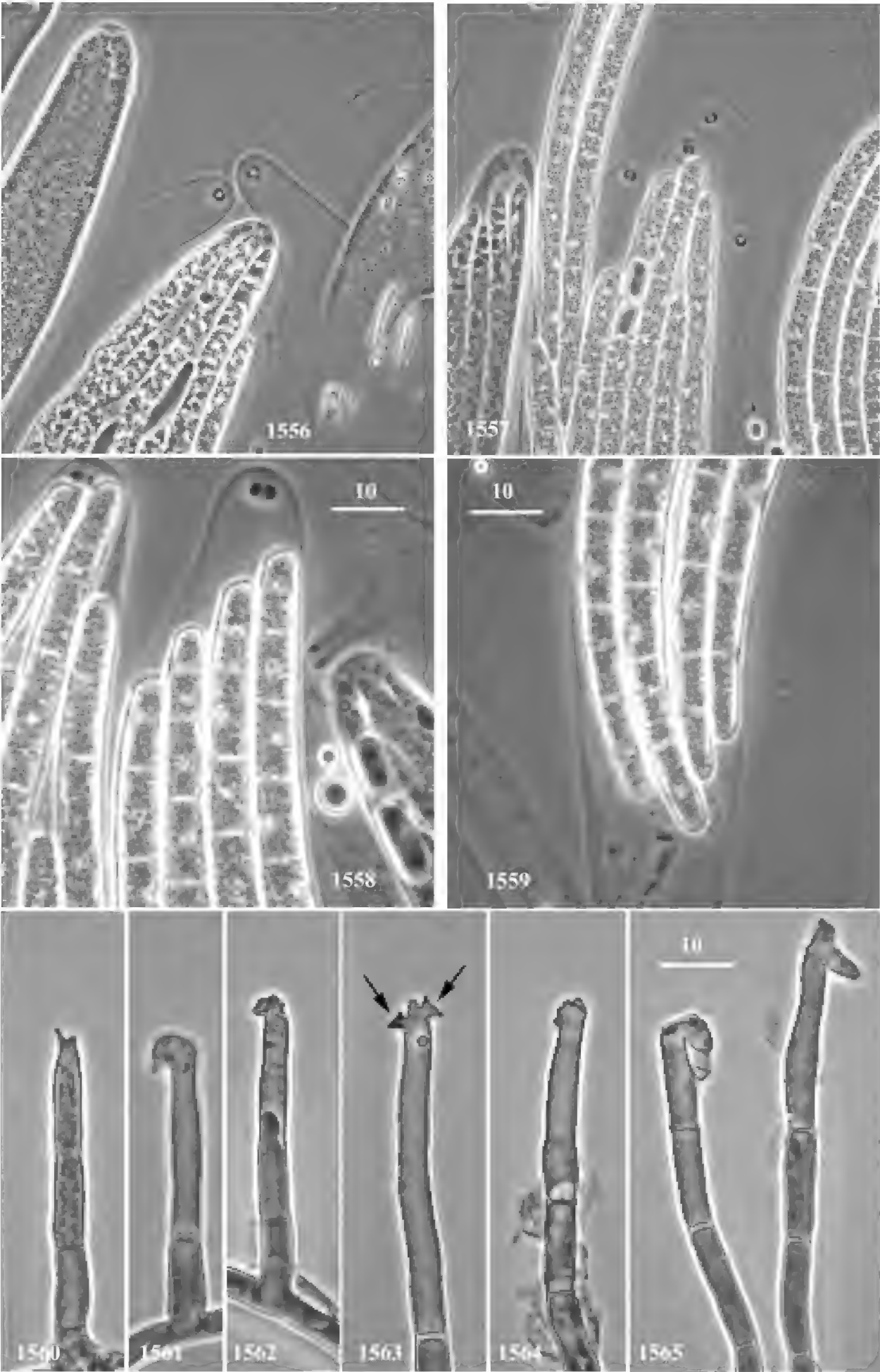
page 153

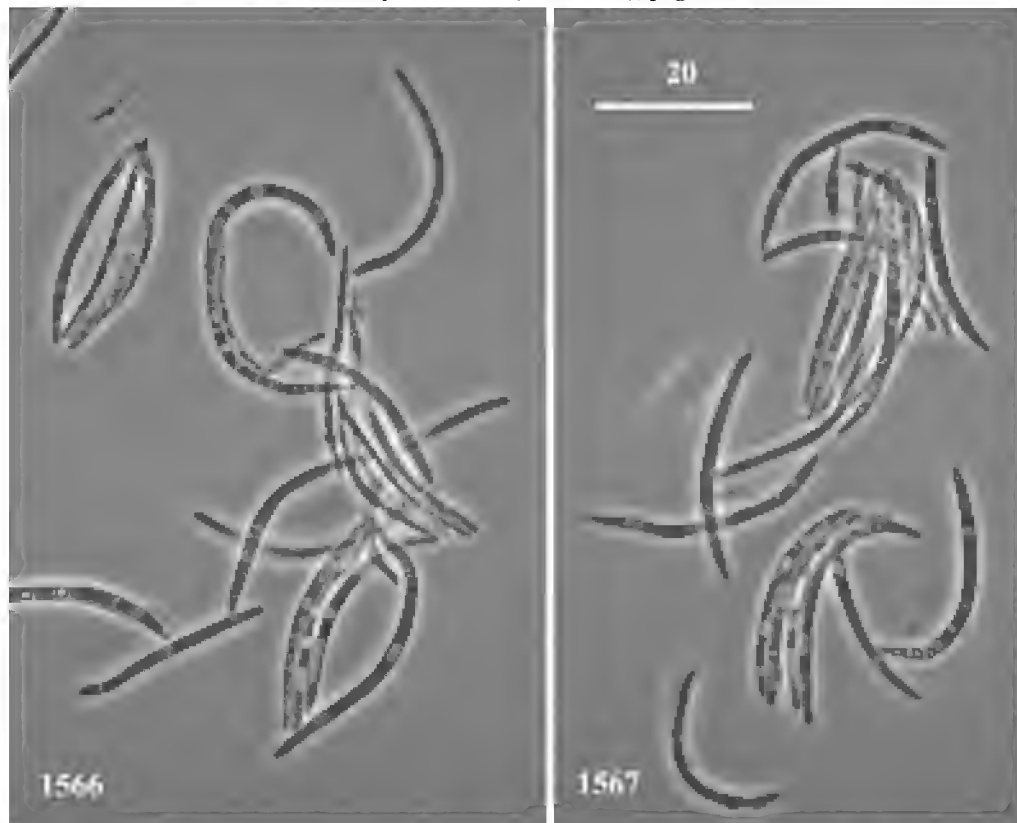
1550 = Perithecia, taken out from b/c-medium.

1551, 1552, 1553 = Asci. (by phase contrast)

Continue to page 155.







- 1554, 1555 = Paraphyses, upper part becoming empty in content. ( by phase contrast )  
 page 154  
 1556, 1557 = Upper parts of of asci, showing apical annula. ( by phase contrast )  
 1558 = Mature asci, showing apical parts of ascospores. ( by phase contrast )  
 1559 = Mature ascus, showing basal parts of ascospores. ( by phase contrast )  
 1560, 1561, 1562, 1563, 1564, 1565 = Conidiophores and conidiogenous cells, arrows in 1563  
 point phialidic funnel-shaped collars. ( by phase contrast )  
 page 155  
 1566, 1567 = Conidia. ( by phase contrast )

***Paragauemannomyces* gen. nov.**

Perithecia superficialia, oviformia, ostiolata, atrobrunnea, setosa; peridia brunnea, parte extima textura globulosa pallide brunnea, parte interiore textura angulari brunnea introrsum pallidiora; setae in parte aerea perithecii dispersae, simplices rectae subulatae apice apiculatae crassitunicatae atro-brunneae. Asci ad basim perithecii fasciculati, unitunicati, anguste cylindro-fusiformes, octospori, apice annulati. Paraphyses filiformes simplices hyalinae. Ascosporae filiformes, fasciculo paralleli dispositae, multi-septatae, laeves, hyalinae, albae in massa.

Similis *Gaeumannomyces* J. A. von Arx & D. L. Olivier (1952), differt peridio extimo textura globulosa et peridio setifero. **Etym.:** *Paragauemannomyces* <= para : similar to. The new genus is similar to *Gauemannomyces*. Species typica postero sectione.

**1378 *Paragauemannomyces sphaerocellularis* sp. nov.**

**Descr** In hospite: Ascomata superficialia, solitaria gregariave, oviformia, ostiolata, 300-425 x 200-350  $\mu$ , atro-brunnea, setosa; peridia 25-50  $\mu$  lata, brunnea, parte extima textura globulosa e cellulis 7.5-15  $\mu$  diam. pallide brunneis composita, parte interiore textura angulari brunnea introrsum pallidiora; setae in parte aerea perithecii dispersae, simplices rectae subulatae crassitunicatae laeves apice apiculatae, atro-brunneae, 25-80  $\mu$  longae, inferne 5-6  $\mu$  latae, 0-3-septatae. Asci ad basim perithecii fasciculati, unitunicatae, anguste cylindro-fusiformes, 105-125  $\mu$  longi, 10-12.5  $\mu$  lati, octospori, apice annulati. Paraphyses filiformes simplices hyalinae. Ascosporae filiformes, fasciculo paralleli dispositae, 65-90  $\mu$  longae, circa medio 3-4  $\mu$  latae, utrinque leviter angustatae, apice obtusae 2.5-3  $\mu$  latae, basi sub-apiculatae, prope basim 2  $\mu$  latae, maxime guttulate, multiseptatae, septis inter sese 5-10  $\mu$  distantibus, laeves, hyalinae, albae in massa. Anamorphosis ignota.

Sterilis in culturis artificialibus. **Etym.:** *sphaerocellularis* <= the species have "spherical cells" in the outer wall of perithecia.

**Hab** Carioso ramunculo indet. arboris dicotyledonis; Shimizu-cho, Wakayama Pref., Japan; April 2000. **Typus:** MFC-21077.

**Ref** J. A. von Arx & D. L. Olivier (1952). Trans. Br. mycol. Soc. 35: 32: 29-33. => p. 32: *Gaeumannomyces graminis* ( Sacc. ) v. Arx & Olivier, gen. et comb. nov. // P. J. Landschoot & N. Jackson (1989). Mycol. Res. 93: 55-58.

**Photo**

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1568 = Ascoma, squashed.

1569 = Peridium, showing textura globulosa and setae.

1570 = Peridium, showing textura globulosa.

1571, 1572, 1573 = Asci and paraphyses. ( 1572 & 1573 by phase contrast )

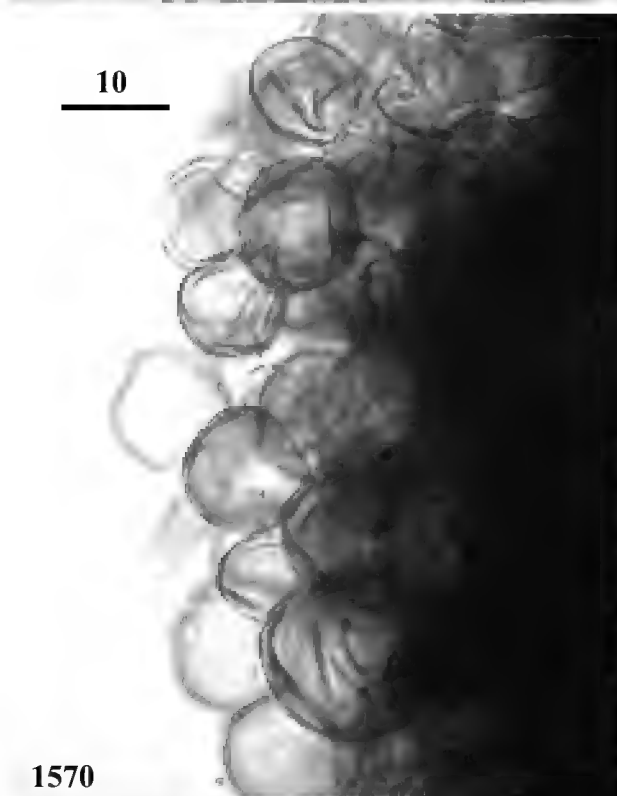
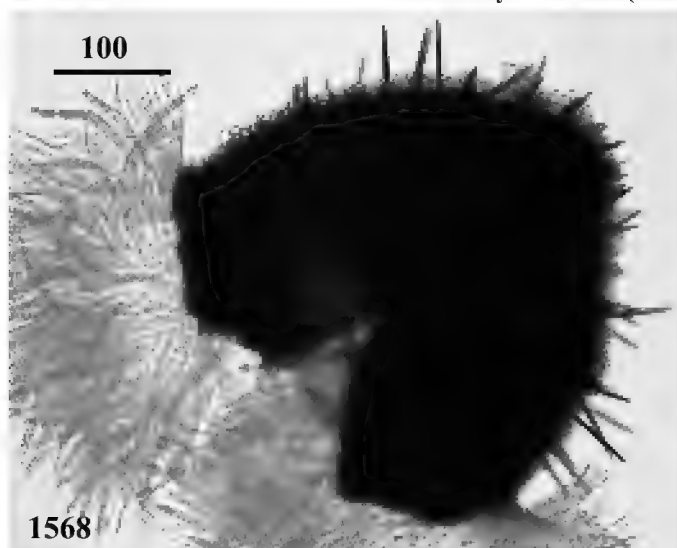
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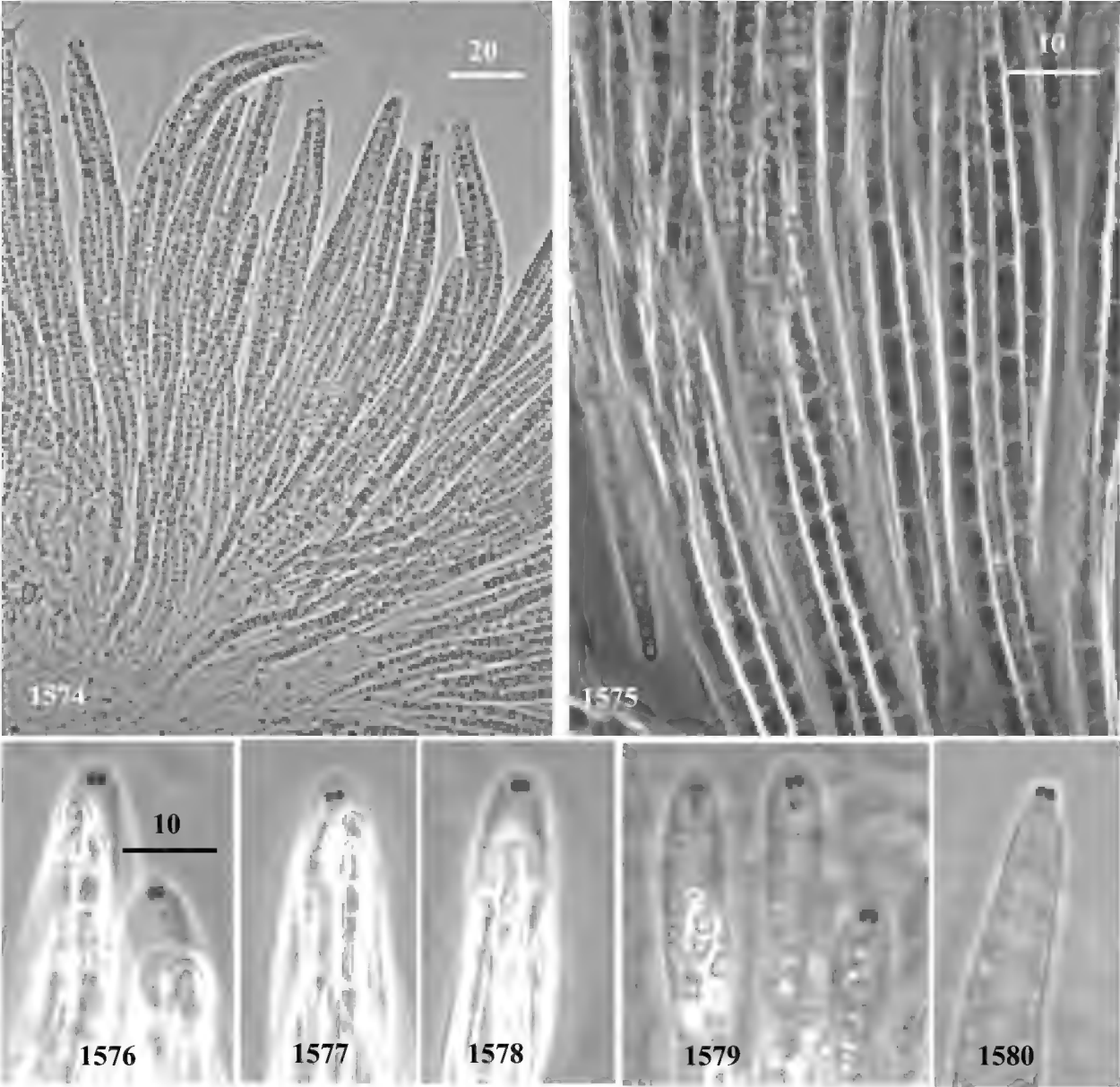
1574 = Asci.

1575 = Ascospores in asci, showing ascospore septation. ( by phase contrast )

1576, 1577, 1578, 1579, 1580 = Apices of asci, showing apical annula. ( by phase contrast )







**1379 *Ophioceras miyazakiense* sp. nov.**

**Descr** Coloniae in b/c-medio effusae, hyphis aeriis sparsis, peritheciis solitarie dispersis. Perithecia obpyriformia plus collo longo cylindrico, 150-300  $\mu$  in diam., 500-875  $\mu$  alta; corpore semi-immerso vel immerso, modice luteo-brunneo, parte aerea hyphis hyalinis usitatis oblecto, peridio 20-25  $\mu$  crasso, partibus duabus composito, parte exteriori textura angulari luteo-brunneo, parte interiori textura porrecta pallide brunneo ad subhyalino; collo longo cylindrico pallide luteo-brunneo, periphysato, externe vis. textura angulari. Paraphyses cylindricae, prope basim 6-8  $\mu$  latae, sursum angustatae apice 1.5-3  $\mu$  latae, pauciseptatae, ad septa leviter constrictae, maturitate deliquescentes. Asci unituncati, cylindrici pede brevissimo, 90-110 x 7-10  $\mu$ , in fasciculo paralleli octospori, apice apparato annulato. Ascospores filiformes, rectae vel leviter curvae vel interdum leviter S-formesve, 75-90  $\mu$  longae, 2.5-3  $\mu$  latae, utrinque leviter angustatae 1.5-2  $\mu$  latae, apice rotundatae, maxime guttulatae, 6-8-septatae, hyalinae, maturitate valide expulsae. Anamorphosem non vidi.

Coloniae in CMA plusminusve cito crescentes, hyphis aeriis modice evolutis, luteae ad luteo-brunneae, margine diffuso. Hyphae vegetativae ramosae, septatae, hyalinae ad brunneae, 1-6  $\mu$  latae, laeves ad asperae, frequenter circinatae. Perithecia non vidi. Anamorphosem non vidi. Res globoideae amorphae luteae ad brunneae, 2.5-8.5  $\mu$  in diam., laeves echinatae, in agar praesentes vel super hyphis adhaerentes. **Etym.**: *miyazakiensis* <= type locality.

**Hab** E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Miyazaki City, Japan. June 2000. **Typus**: cultura b/c-medio exsiccata, MFC-21084.

**Photo**

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1581 = Perithecia on b/c-medium in side view.

1582 = Surface view of perithecial neck.

1583, 1584 = Peridia of neck part, strongly squashed.

1585, 1586 = Asci and paraphyses. ( by phase contrast )

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1587, 1588, 1589, 1590, 1591, 1592 = Asci. ( by phase contrast )

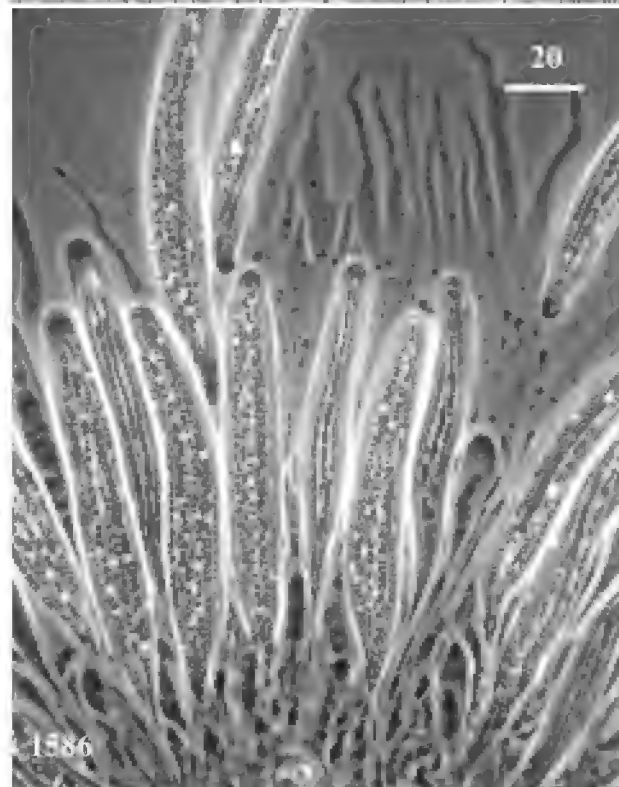
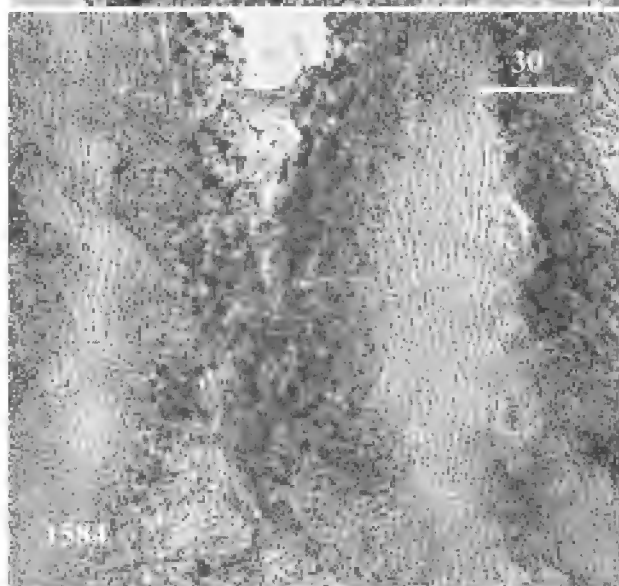
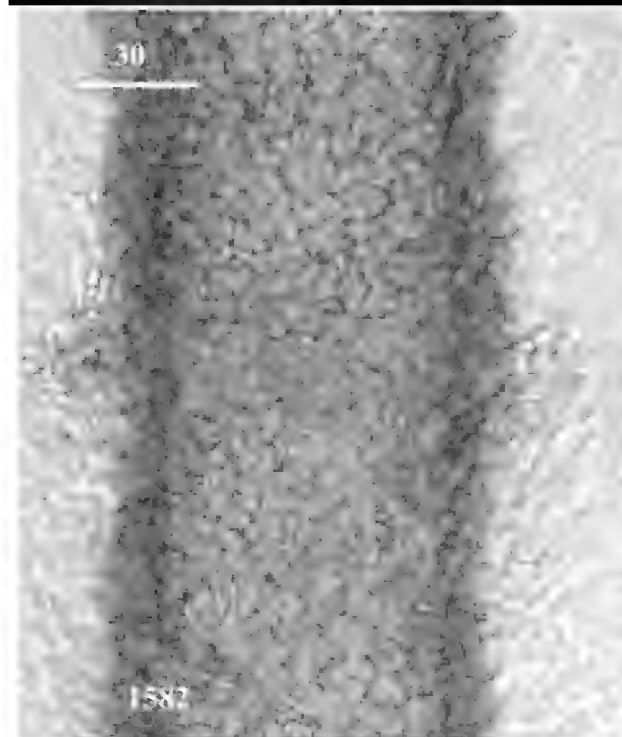
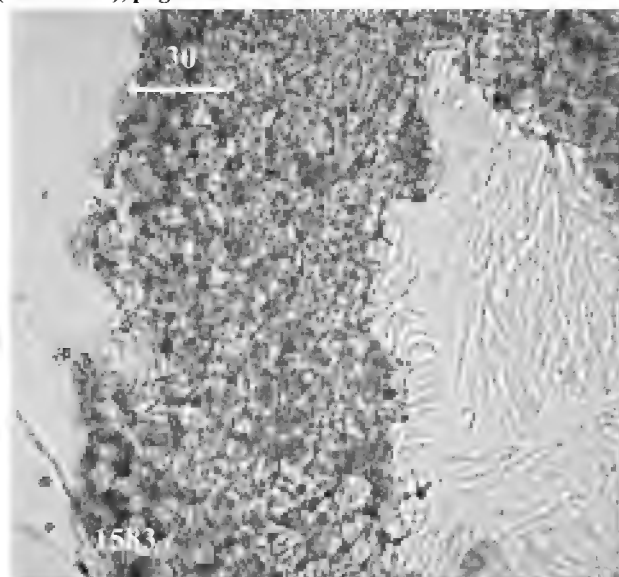
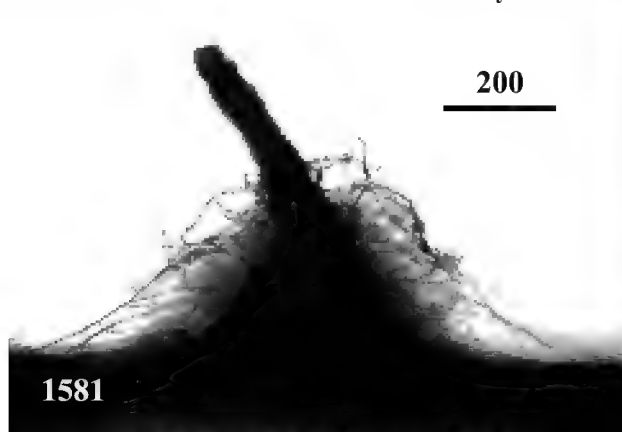
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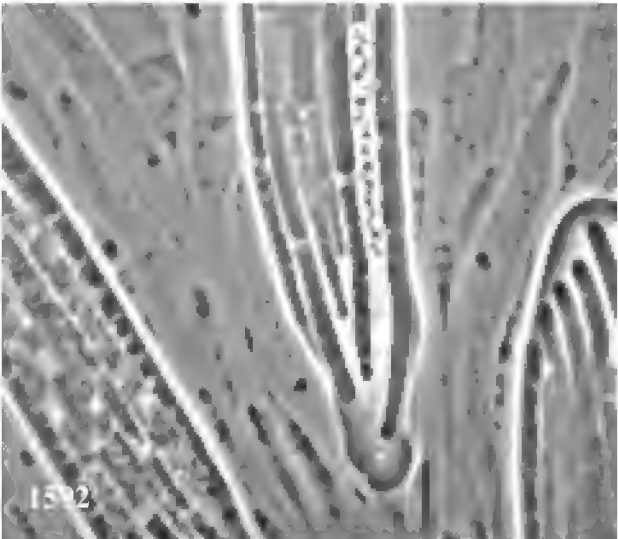
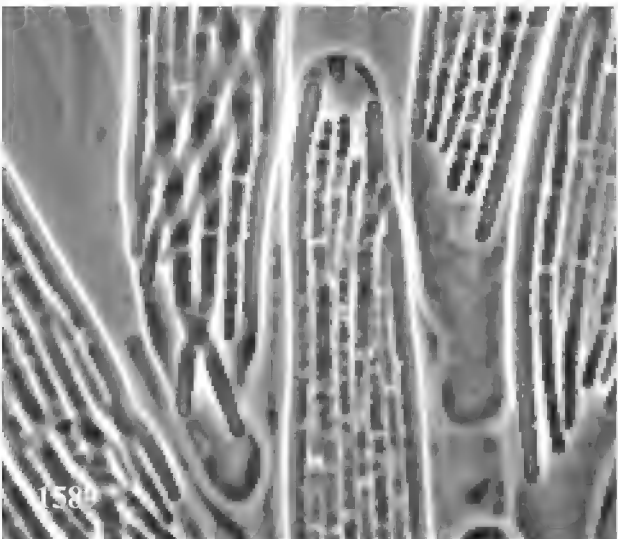
1593, 1594 = Paraphyses. ( by phase contrast )

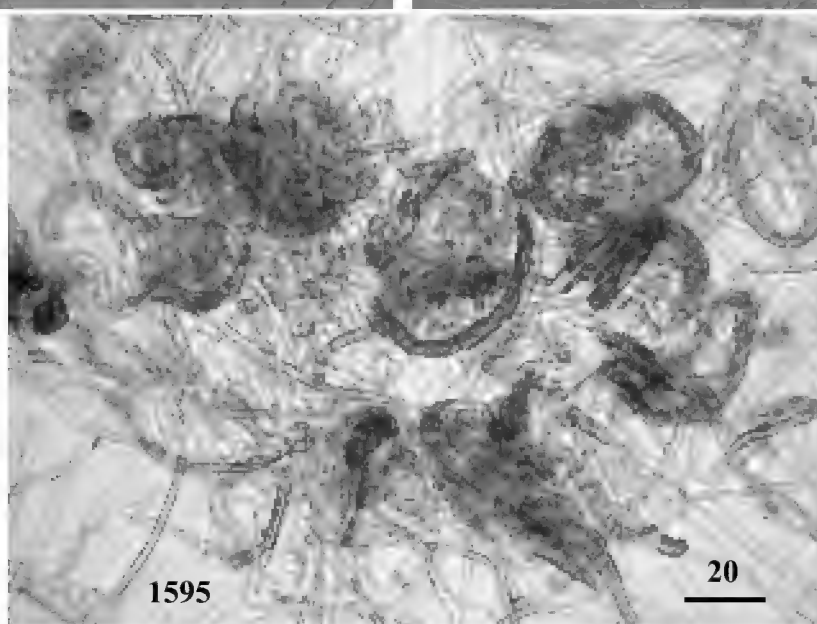
1595 = Dark looped hyphae abundantly formed on CMA.

page 211 ( color plate )

1811, 1812 = Perithecia on b/c-medium.









**1380 *Ophioceras tambopataense* sp. nov.**

**Descr** Coloniae in b/c-medio effusae, sine hyphis aeriis, peritheciis dispersis sub lente ut punctis ateris. Perithecia solitaria vel gregaria, globosa collo longo cylindrico, praeter colla immersa; corpora 300-500  $\mu$  in diam. atrobrunnea; colla cylindrica longa, 225-1100  $\mu$  longa 50-95  $\mu$  lata, brunnea parte apicali pallidiora. Peridium corporis membranaceum ex partibus duabus compositum; strato exteriori textura epidermoidea brunneo, strato interiori textura angulari subhyalino; peridium colli textura intricata, e hyphis septatis 2.5-4.5  $\mu$  latis brunneis intro hyalinis compositum, superficie pilis lateralibus hyalinis brevibus sinuatis obtectum. Asci unitunicati, fasciculati, anguste cylindrici, 120-150  $\mu$  longi 8.5-11  $\mu$  lati, apice clare annulati, pede brevi angusto, octospori in fasciculo paralleli vel in fasciculo leviter intricato. Paraphyses in ascomatibus praematuris manifeste visi, filiformes simplices septatae ad septa constrictae, infra 5-9  $\mu$  latae supra angustascentes ad 2-3.5  $\mu$ , hyalinae maturitate deliquescentes. Ascospores filiformes, rectae vel leviter curvae ut in littera C vel S, (72-)85-106  $\mu$  longae, 3-3.5  $\mu$  latae ad partem latissimum ( circum medium ), utrinque angustatae, basim versus leviter angustiore, praecipue 5 septis, quae ob contentum maxime guttulatam difficulter visa, laeves hyalinae, in massam cremeam ad pallide salmoneam mucosam ad orem perithecii lectae.

Anamorphosis est *Phialophora* ( similis *Phialophora radiculicola* R. F. Cain ). Conidiophora semimacronemata vel destituta. Cellulae conidiogenae cylindricae ad anguste claviformes, rectae vel curvae, 5-15  $\mu$  longae, 2-3.5  $\mu$  latae, laeves, pallide brunneae, apice uniphialidicae collo cylindrico ca. 1  $\mu$  longo. Conidia lunata, apicibus obtusa, 5-8  $\mu$  longa, circum medium 1.2-2  $\mu$  lata, unicellularia, laevia, hyalina.

Coloniae in CMA tenuiter effusae, sine hypis aeriis, pallidissime fuscae, aliquot peritheciis dispersis, margine lato diffuso incolorato. Perithecia fere superficialia, solitaria vel gregaria, globosa: corpora 250-440  $\mu$  in diam., brunnea; collo ( interdum 2 collis ) cylindrico, 185-900  $\mu$  longo, 65-100  $\mu$  lato, brunneo.

**Etym.**: *tambopataense* <= the type locality of this fungus.

**Hab** Fronde carisa palmarum, in fundo sylvarum densarum; Tambopata Nature Reserve, Madre de Dios, Peru; October 1990. **Typus**: cultura b/c-medio exsiccata, MFC-1P459.

**Mem** The new species is close to *Ophioceras dolichostomum* ( Berk. & Curt.) Sacc. (1883), but differs from the latter in textura epidermoidea body peridium and neck with short hyaline sineous lateral hairs; also similar to *Gaeumannomyces graminis* ( Sacc. ) J. A. von Arx & D. L. Olivier (1952) in general morphology and in having *Phialophora radiculicola* -like anamorph, but differs in long cylindrical perithecial neck and habitat.

**Ref** R. F. Cain (1952), Canad. J. Bot. **30**: 338-343. => p. 342: *Phialophora radiculicola* sp. nov. // K. E. Conway & M. E. Barr (1977), Mycotaxon **5**: 376-380. Classification of *Ophioceras dolichostomum*. => Perithecia immersed in wood, ca. 500  $\mu$  diam., with beak 1-5  $\mu$  long. Peridium firm, blackened except at the apex of the beak, body surface composed of a large celled textura angularis, beak composed of a textura intricata with hyphae arranged obliquely and crossing one another in the upper regions. Asci 100-130 x 8-12  $\mu$ . Paraphyses broad, tapering to tips. Ascospores 94-110 x 2-3  $\mu$ , filiform, 3-7 septate, occasionally with additional septa. // J. Walker (1980), Mycotaxon **11**: 1-129. *Gaeumannomyces*, *Linocarpon*, *Ophiobolus* and several other genera of scolecospored ascomycetes and *Phialophora* conidial states, with a note on hyphopodia. => p. 62-66. *Ophioceras leptosporum* ( Iqbal ) Walker c. nov., etc. // C. A. Shearer (1989), Canad. J. Bot. **67**: 1944-1955. => *Pseudohalonectria* similar to *Ophioceras* Sacc. and *Mycomedusispora* ( Rick ) Corroll & Munk. / *Pseudohalonectria* and *Ophioceras* belong to *Sordariales* by DNA data. / *P. phialidica* is known to have phialidic anamorph. // W. Chen et al. (1999), Mycologia **91**: 84-94. => Phylogeny of *Ophioceras* spp. based on morphological and DNA seq. data. *Ophioceras*, *Gaeumannomyces*, and *Pseudohalonectria* are similar each other. // C. A. Shearer, J. L. Crane, W. Chen (1999), Mycologia **91**: 145-156. Freshwater Ascomycetes: *Ophioceras* species. => *Ophioceras* and *Pseudohalonectria* provisionally placed in the *Magnaporthaceae*. / *Gaeumannomyces* might be a synonym of *Ophioceras*. / p. 154: key to species from freshwater: including *O. leptosporum*, *O. tenuisporum*, *O. fusiforme*, *O. commune*, *O. dolichostomum*, *O. venezuelense*, and *O. arcuatisporea*.

**Photo**

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1596 = Perithecia taken out from CMA.

1597, 1598 = Surface view of perithecial body, showing *textura epidermoidea*.

1599, 1600 = Surface view of perithecial neck, showing *textura intricata*.

1601 = Lateral short hyaline sineous hairs on perithecial neck. ( by phase contrast )

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1602 = Premature asci and paraphyses. ( by phase contrast )

1603, 1604 = Mature asci. ( by phase contrast )

1605 = Initial of asci. ( by phase contrast )

1606, 1607, 1608, 1609, 1610, 1611 = Annuli of ascal tips. ( by phase contrast )

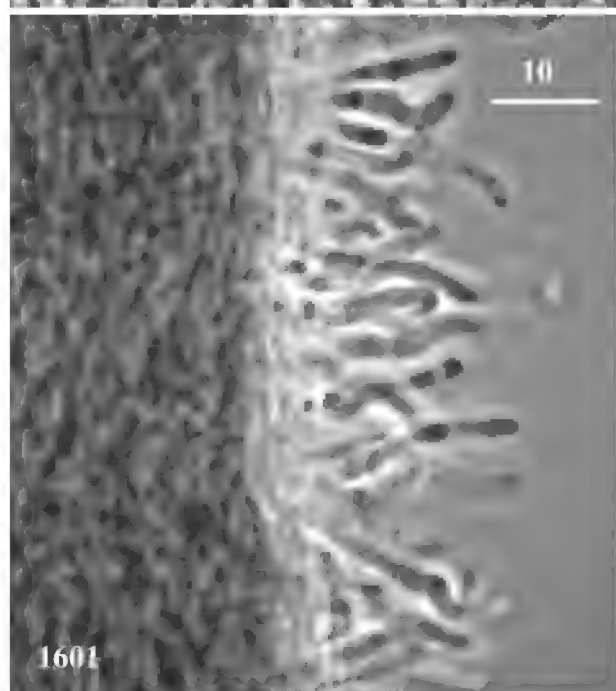
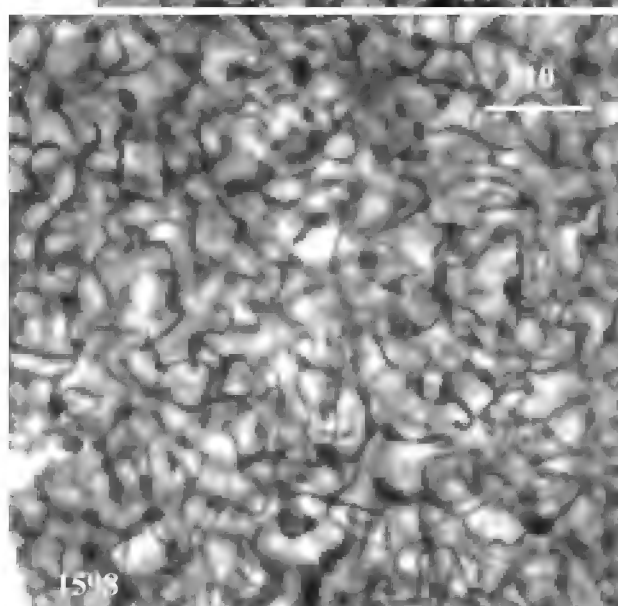
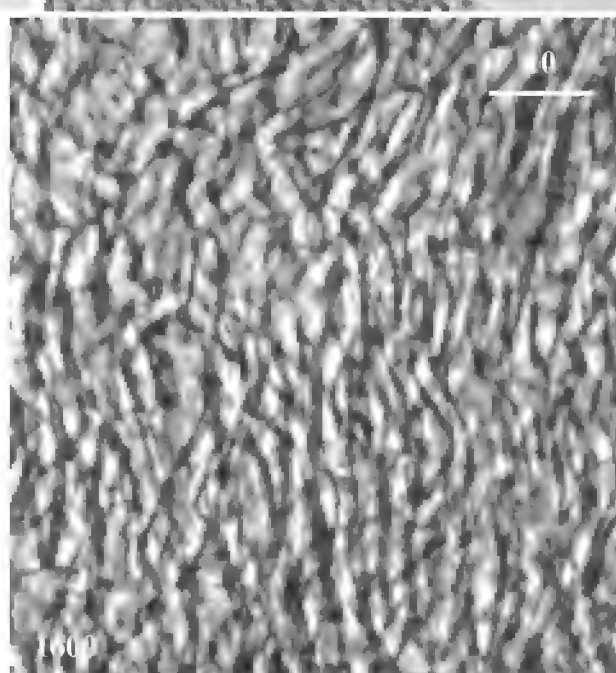
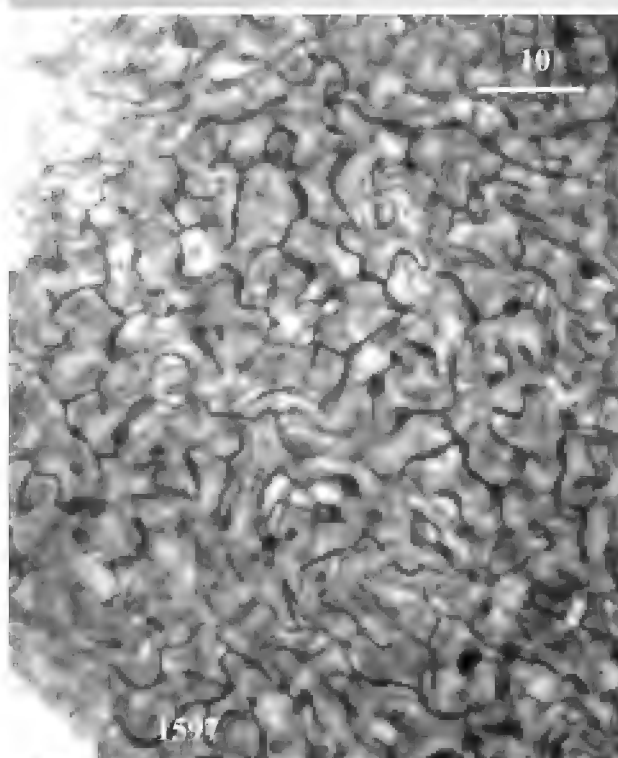
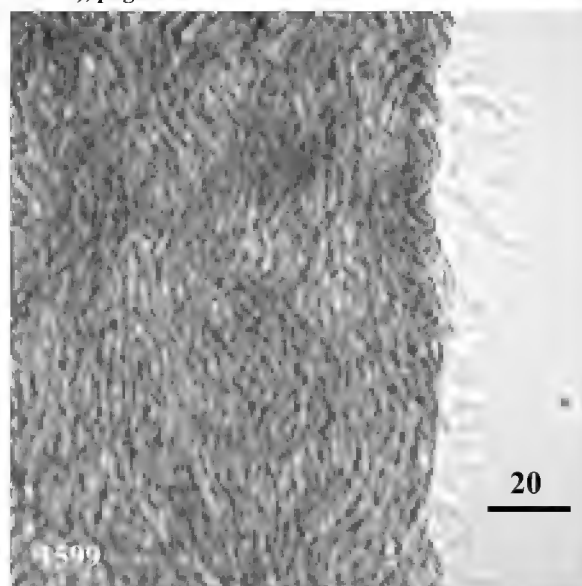
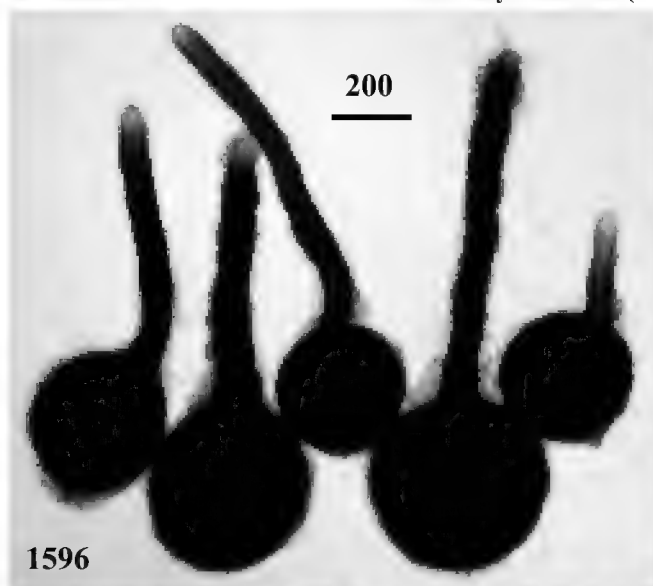
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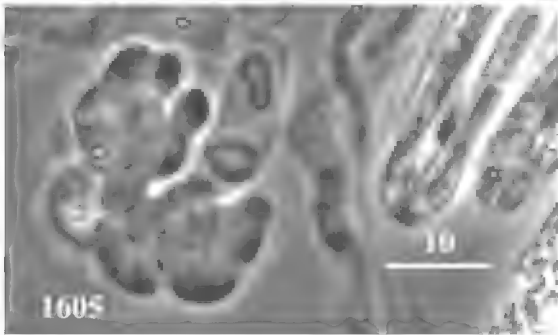
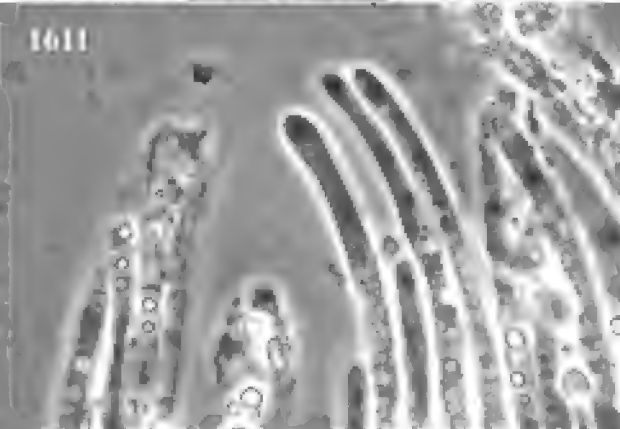
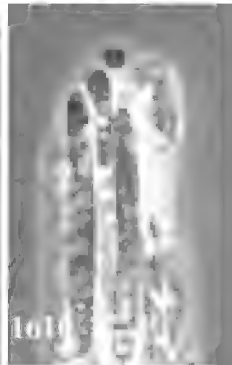
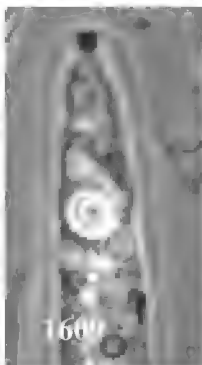
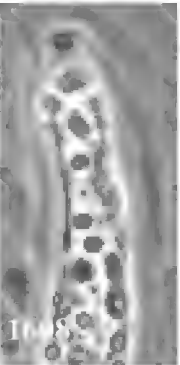
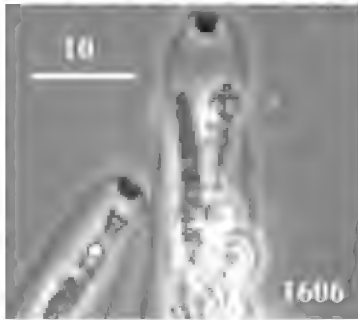
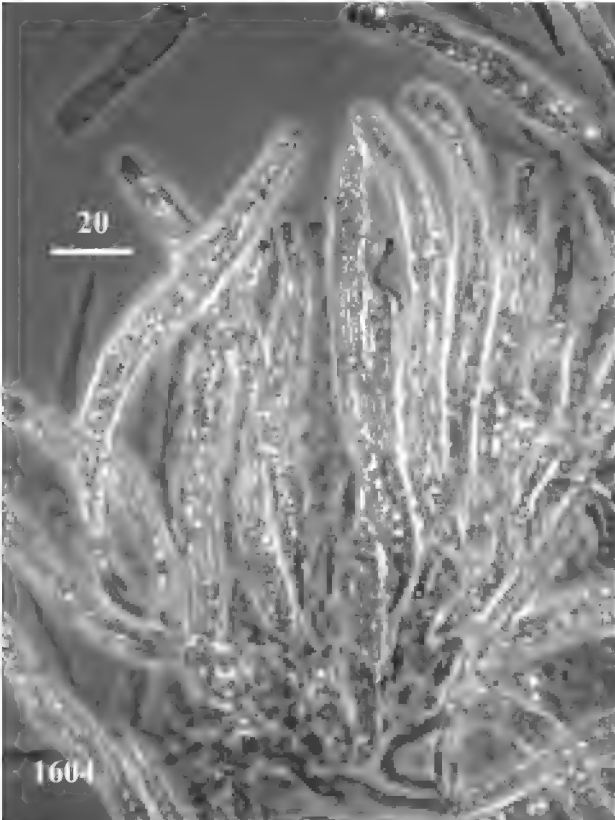
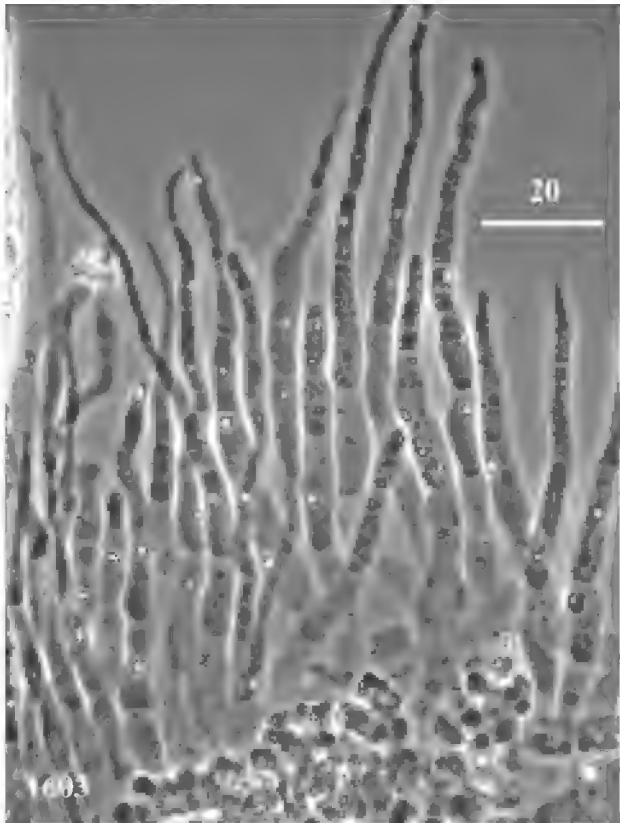
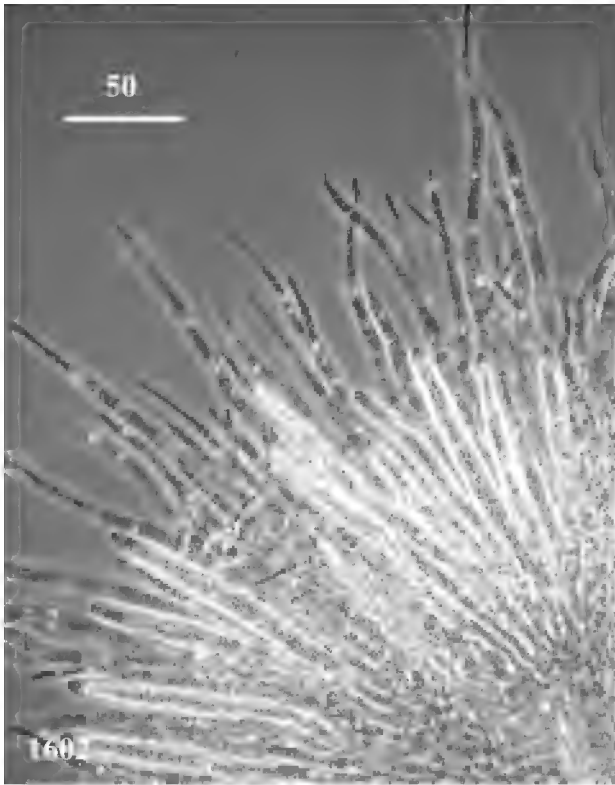
1612 = Paraphyses in young ascoma. ( by phase contrast )

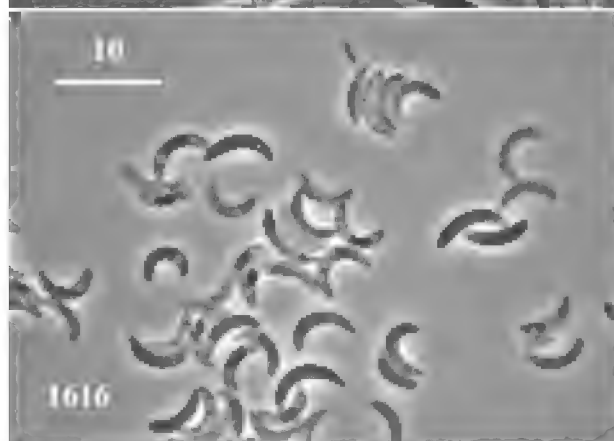
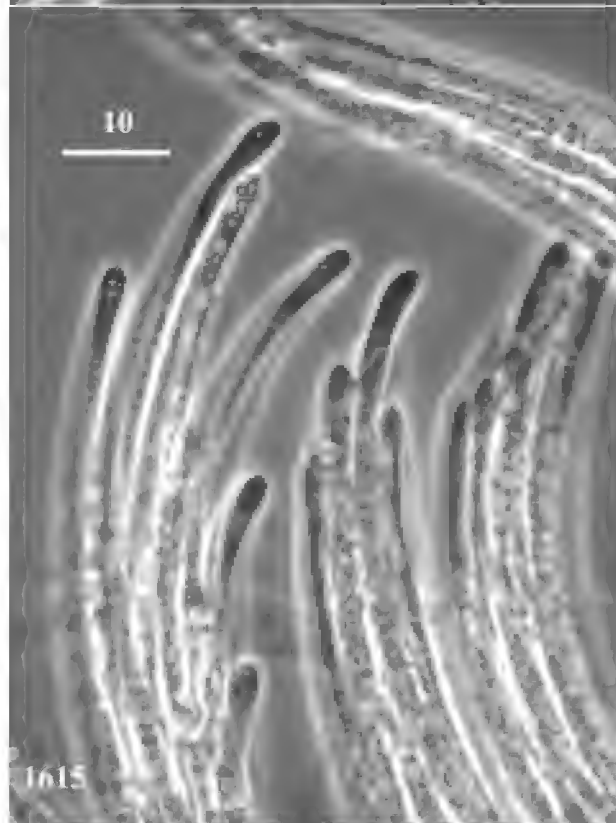
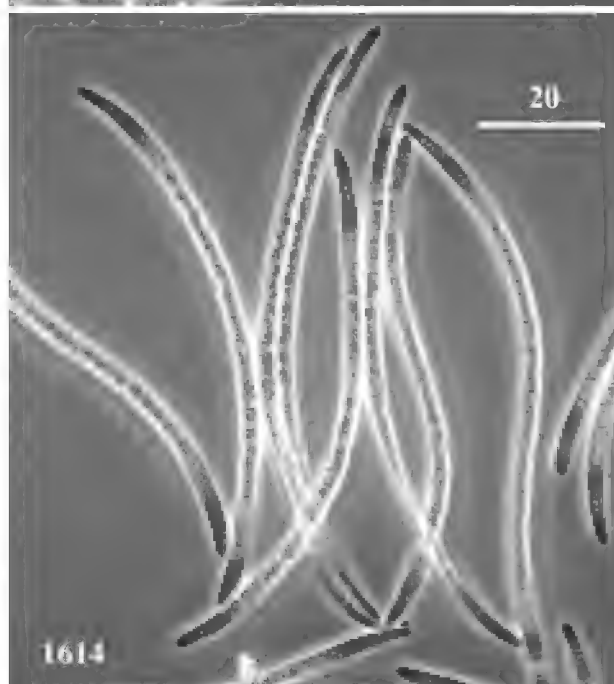
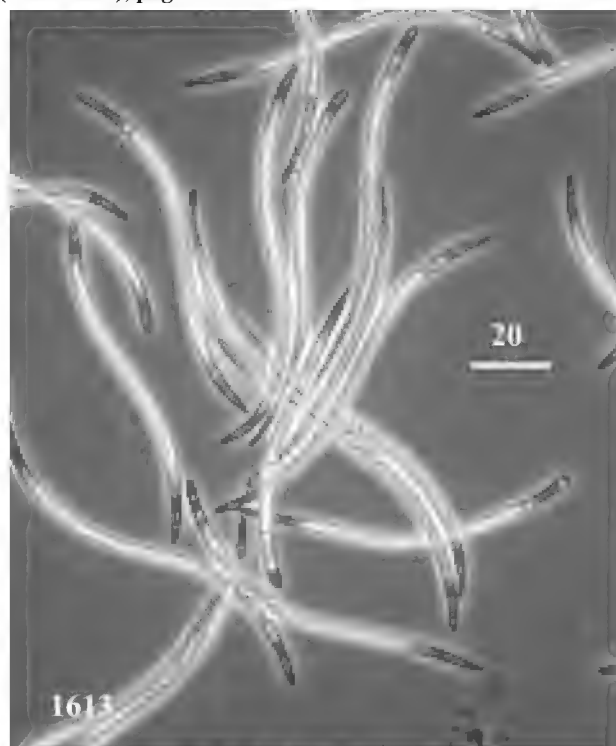
1613, 1614, 1615 = Ascospores. ( by phase contrast )

1616 = *Phialophora* state, Conidia. ( by phase contrast )

1617 = *Phialophora* state, phialides. ( by phase contrast )







**1381** *Podospora inaequalis* ( Cain ) Cain. Canad. J. Bot. **40**: 460. 1962.

== *Sordaria inaequalis* Cain apud Cain & Groves (1948), Canad. J. Res., C, **26**: 489.

== *Pleurage inaequalis* ( Cain ) C. Moreau (1953), Encycl. Mycol. **25**: 260.

== *Schizothecium inaequale* ( Cain ) Lundq. (1972), Symb. Bot. Upsal. **20**: 334.

**Descr** In CMA perithecia superficialia vel immersa, dissita ad gregaria, obpyriformia, 150-240 x 80-140  $\mu$ ; parietes tenues modice brunnei, aspectu superficiali textura angulari. Statu maturo ascosporae fuscae per parietem tenuem visae. Asci ad basim perithecii fasciculati, paraphysati, unitunicati, cylindrici, sine apparato apicali, oblique uniseriate tetraspori. Ascosporae e superficie vis. ellipsoideae, a latere vis. inaequilaterales, (16-)17.5-20(-23) x 9.5-11  $\mu$ , sine ornamento superficiali, maturitate ejectae, poro germinali 1.0-1.5  $\mu$  diam. apice vel interdum leviter subapice praeditae, juventute basi appendice cylindrica ad claviformi 2.5-7.0 x 1.0-1.5  $\mu$ . Appendices in ejectis ascosporis generatim deciduae.

Anamorphosem non vidi.

Coloniae in b/c-medio peritheciis ut in CMA.

**Hab** MFC-21072. E solo; Santiago, Chile; April 18, 1978.

**Ref** J. H. Mirza & R. F. Cain (1969), Canad. J. Bot. **47**: 2025. // S. Udagawa & T. Muroi (1979), Trans. mycol. Soc. Japan **20**: p. 19-20, 22. => On Weitzman & Silva-Huntger's medium: perithecia 200-380 x 100-180  $\mu$ ; asci 4-spored; ascospores uniseriate, ellipsoidal in face view, inequilateral in side view with one side almost flattened, 18-24(-28) x 10-12  $\mu$ , appendices 5-8 x 1.5-3.0  $\mu$ ; no anamorphosis. // *Pleurage inaequalis* ( Cain ) C. Moreau (1953), Encycl. Mycol. **25**: 260. // S. K. Abdullah & S. S. Rattan (1978), Mycotaxon **7**: 102-116. => following 10 *Podospora* species are described, with a key: *inaequalis*, *anserina*, *fimbriata*, *vesticola*, *miniglutinans*, *bicornis*, *communis*, *prethopodalis*, *decipiens*, and *longicaudata*.

**Photo**

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1618 = Perithecia formed on CMA, with scattered ejected ascospores, after 14 days.

1619, 1620, 1621 = Perithecia, asci with dark ascospores visible through semi-transparent peridia.

1622 = Perithecium, gently squashed.

1623, 1624 = Perithecial necks.

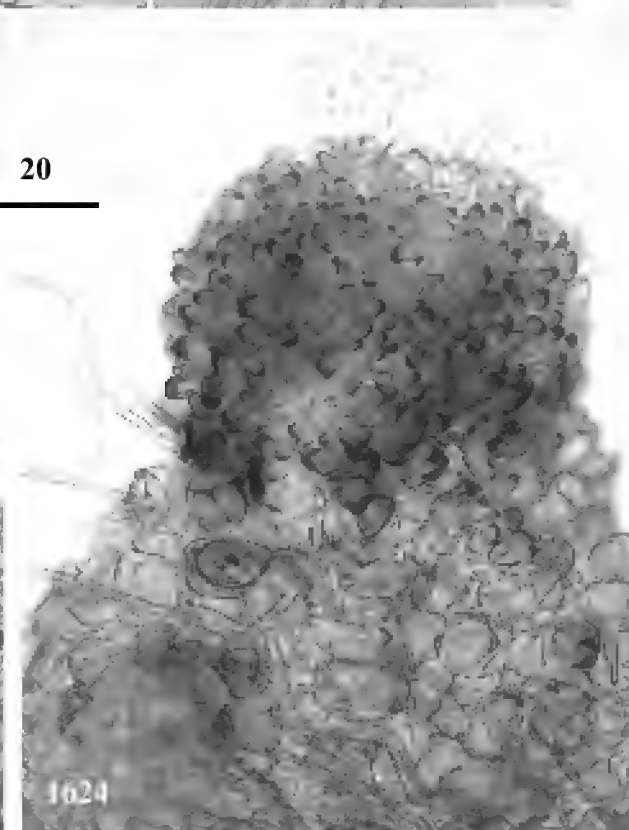
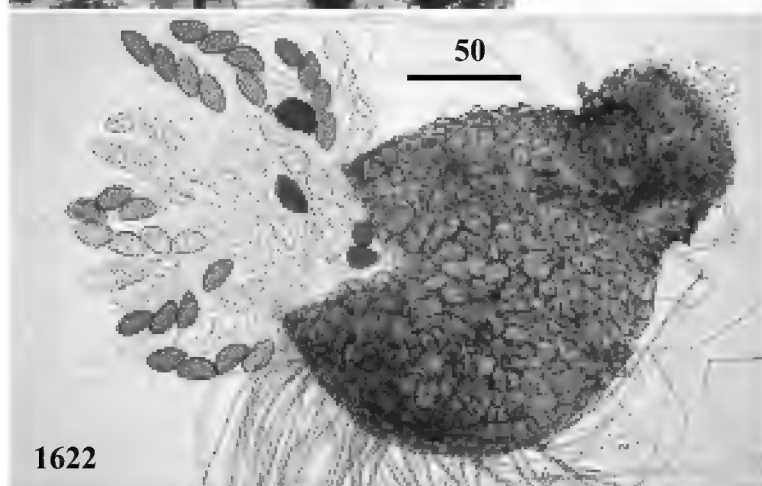
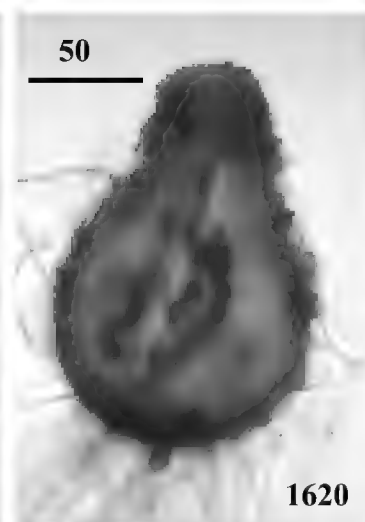
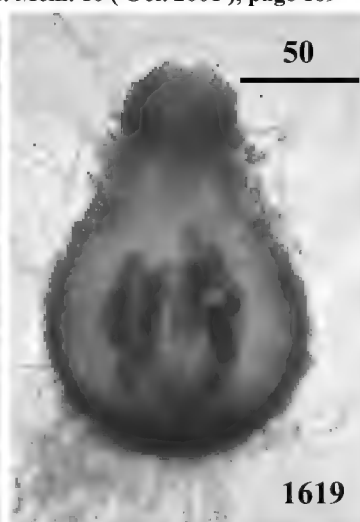
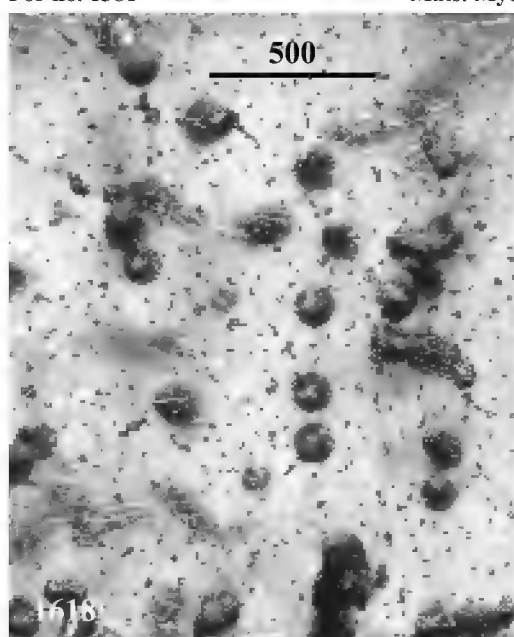
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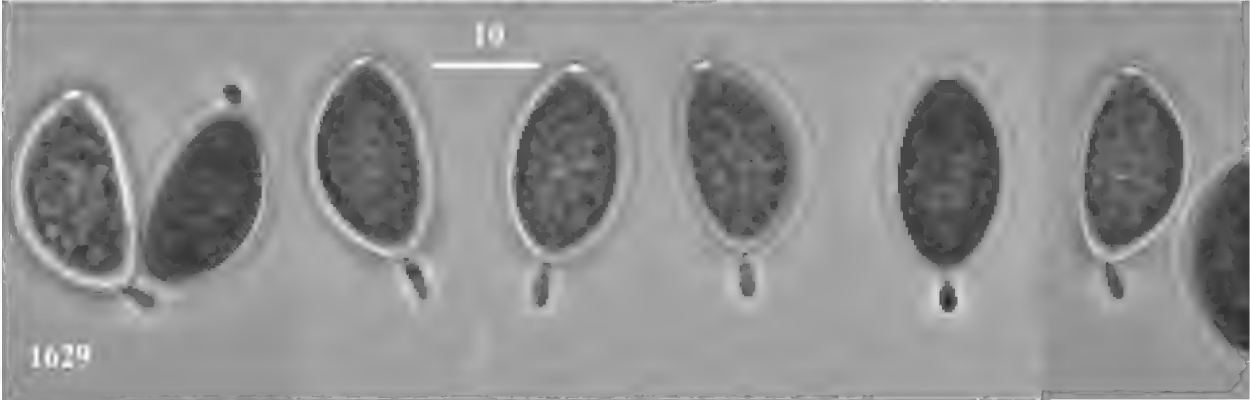
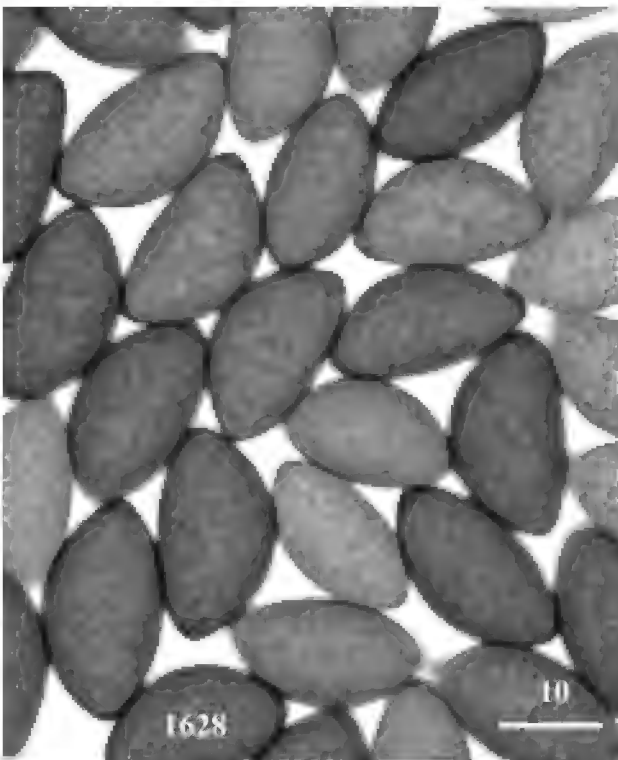
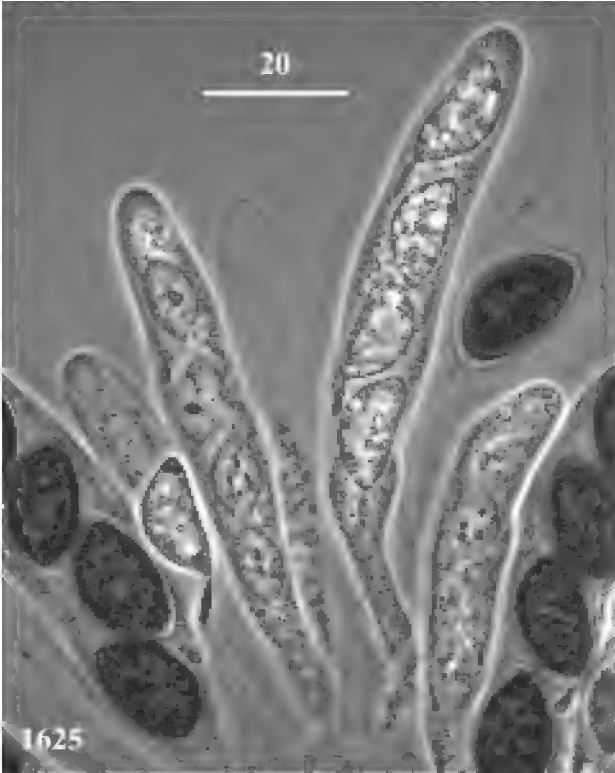
1625, 1626, 1627 = Young and mature asci. ( by phase contrast )

1628 = Ascospores.

1629 = Young ascospores, showing basal appendages and apical germ pores. ( by phase contrast )







**1382** *Apiosordaria rotula* ( Cooke ) von Arx, Genera of Fungi Sporulating in Pure Culture, 3rd. ed., p. 160. 1981.

= = *Sphaeria rotula* Cooke, Handbook Brit. Fung. **2**: 868. 1871.

= = *Jugulospora rotula* ( Cooke ) Lundqvist, Symb. Bot. Upsal. **20** (1): 260. 1972.

**Descr** In CMA perithecia superficialia ad immersa, obpyriformia, atrofusca, ostiolo periphysato, nuda vel hyphas usitatas ferentia, sine setis circum ostiolum; paries e stratis duobus compositus; strato exteriore externe vis. textura angulari brunneo, strato interiore pseudoparenchymatico hyalino. Asci ad basim fasciculati, cylindrici pede angustescenti, apice apparato annulato, uniseriate obliqueque octospori interdum tetraspori. Paraphyses filiformes septatae plusminusve sinuolatae hyalinae 1.5-2  $\mu$  latae. Ascosporae juventute fusiformes continuae hyalinae, maturitate bicellulares; cellula superiore atrobrunnea, aspera, 17-20 x 13-15  $\mu$ , poro germinali apicali c. 1.5  $\mu$  diam.; cellula inferiore parva obconica hyalina 3-5  $\mu$  longa basi 4-5  $\mu$  lata, vetustate collabens. Anamorphosem non vidi.

**Hab** MFC-21006. E solo sylvae ( arbores dicotyledonum ); Urasoko, Fukui Pref., Japan; 1995.

**Ref** Nils Lundqvist (1967), Arkiv f. Botanik **6**: 327-337. => *Sphaeria rotula*: ascospores 18-19 x 13-14  $\mu$ , at last blackish brown, with an irregularly pitted and warted episporium, apiculus ( or pedicel ) triangular, 2.8 x 2.8  $\mu$ , remaining hyaline but disappearing with age; germ pore single, apical, c. 2  $\mu$  diam. // Nils Lundqvist (1972), Symb. Bot. Upsal. **20**: 374 + 63 plates. p. 256-261. // J. C. Krug, S. Udagawa and R. S. Jeng (1983), Mycotaxon **17**: 533-549. The genus *Apiosordaria*. => with a key to *Apiosordaria* spp.: *rotula*, *effusa*, *verruculosa*, *microspora*, *yaeyamensis*, *tuberculata*, *vermicularis*, *spinosa*, *sacchari*, *jamaicensis*, *terrestris*, *longicaudata*, *stercoraria*, *tetraspora*, *vestita*, and *rugosa*.

**Photo**

page 172

1630 = Squashed perithecium, from CMA.

1631 = Asci.

1632 = Very young asci. ( by phase contrast )

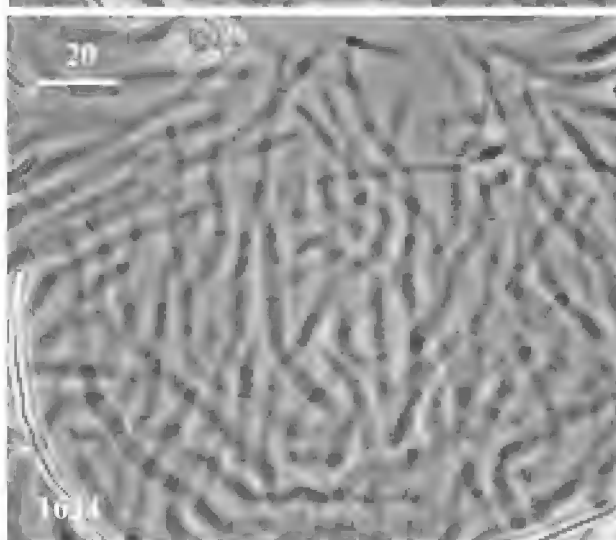
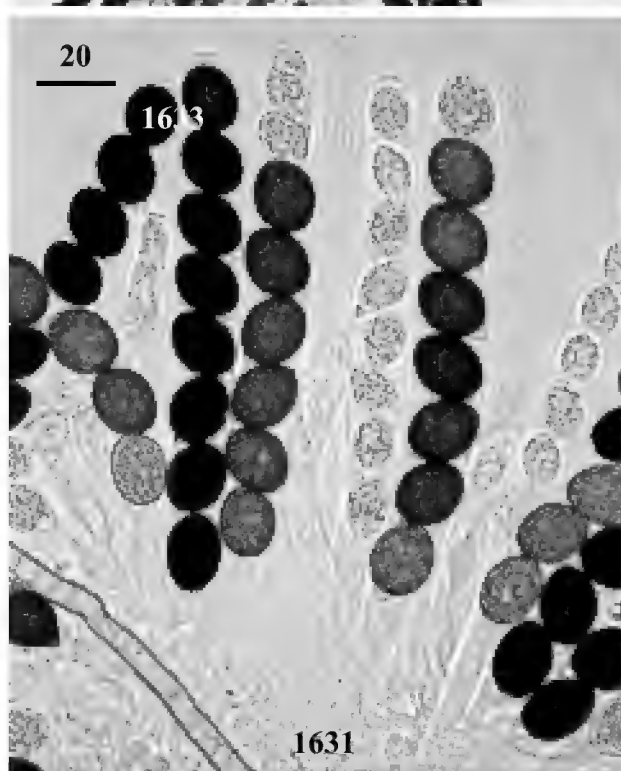
1633 = Young asci and paraphyses, squashed mount. ( by phase contrast )

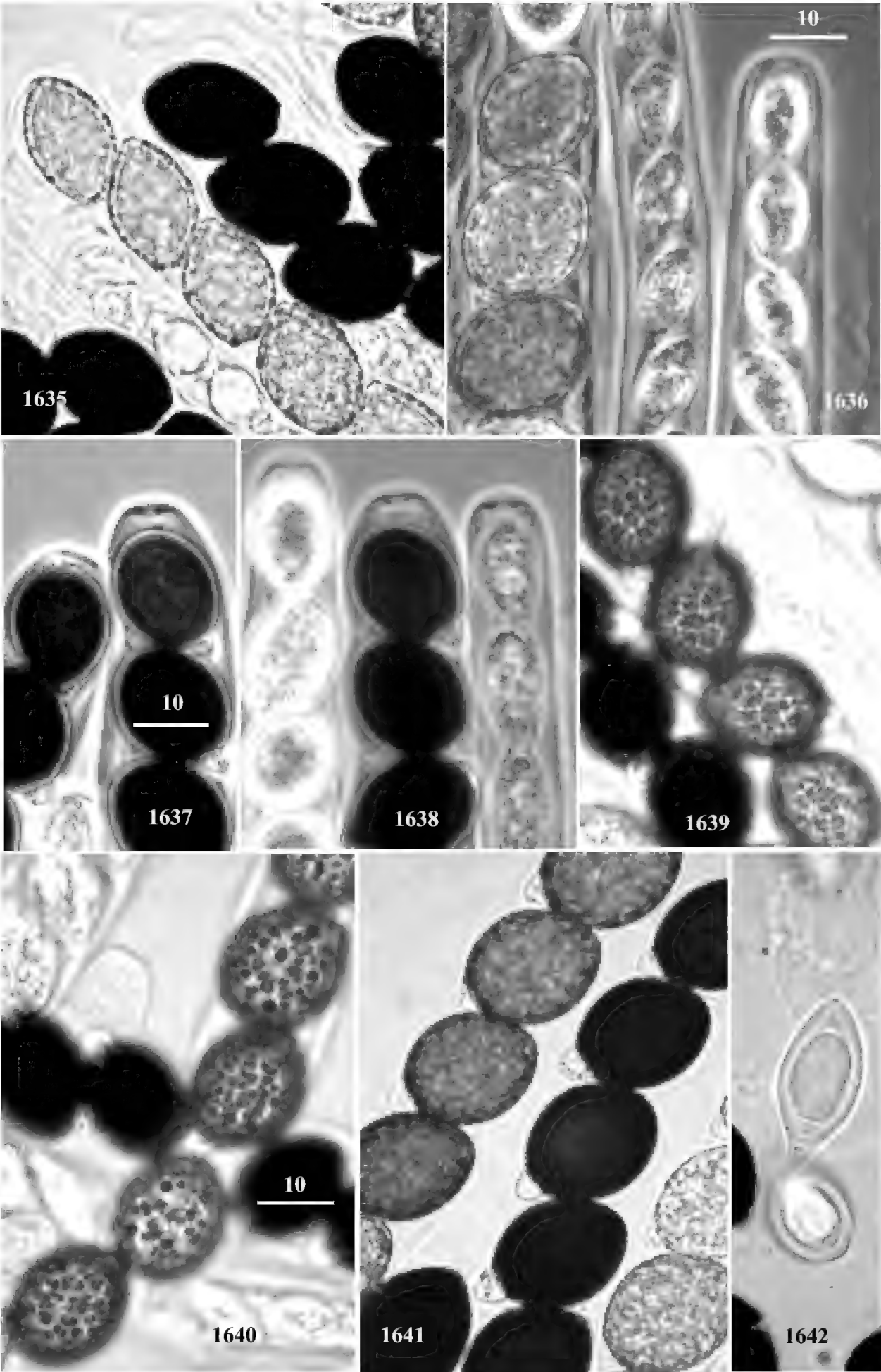
1634 = Paraphyses from squashed mount of young perithecium. ( by phase contrast )

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1635, 1636, 1637, 1638, 1639, 1640, 1641 = Asci and ascospores, young and mature. ( 1636, 1637, 1638 by phase contrast )

1642 = Young ascospore.





**1383 *Diplogelasinospora princeps*** R. F. Cain (1961). Canad. J. Bot. **39**: 1670.

**Descr** Coloniae in CMA diffusae, area centrali laxae coactae, fuscae. Ascomata sub hyphis aeriis abundanter formata, superficialia, dissita, globosa, 175-325  $\mu$  in diam, non-ostiolata, atro-brunnea, hyphis vegetativis radiatis pallide brunneis vestita; parietes externe vis. textura angulari, extime pro parte secus septa modice carbonacei, e 2-3 stratis cellularum complanatarum modice brunnearum compositi. Asci cylindrici, fasciculati, uniseriati vel plusminusve oblique octospori. Paraphyses abundantes, moniliformes, hyalinae, maturitate deliquescentes. Ascospores oblongae, 22.5-27 x 11.5-14  $\mu$ , foveolatae ( foveae 1.0-1.5  $\mu$  diam.), transverse 1-septatae; unumquidque in cellulam fuscam leviter magniorem et cellulam hyalinam leviter parviorem divisa, in ratione = 1 : 0.55-0.60; vetustate cellulae parviores hyalinae collabentes; pori germinales non confirmati. Anamorphose non observo.

**Hab** MFC-21041. E solo sylvae ( arbores dicotyledonum ); Akame Falls, Nabari City, Mie Pref.; Nov. 1999.

**Ref** R. F. Cain (1961). Canad. J. Bot. **39**: 1667-1677.  $\Rightarrow$  *Diplogelasinospora princeps* gen. et sp. nov.: ascosporis ellipsoideis, 19-25 x 10-14  $\mu$ , 1-septatis, cellula inferiore atera, 12-17 x 10-14  $\mu$ . // S. Udagawa & Y. Horie (1972) J. Jap. Bot. **47**: 297-305.  $\Rightarrow$  *Diplogelasinospora grovesii* n. sp.: ascosporis (22-)24-28 (-33) x 10-14  $\mu$ , cellulis fuscis (13-)16-20  $\mu$  longis. Anamorphosis *Geotrichum*. / *D. princeps*: ascosporis 20-27 x 10-15  $\mu$ , cellulis fuscis 12-16  $\mu$  longis. anamorphosis: *Geotrichum*. // S. Udagawa et al. (1973), Bull. Natn. Sci. Mus., Tokyo **16**: 513.  $\Rightarrow$  *Diplogelasinospora inaequalis* Udagawa n. sp.: ascosporis 16-20(-22) x 10-14  $\mu$ ; cellula inferiore fusca 15-17  $\mu$  longa, cellula superiore hyalina ad dilute brunnea, 1.5-4 (-5)  $\mu$  longa. // Icones Microfungorum a Matsushima Lectorum, 1975, p. 173.  $\Rightarrow$  *D. inaequalis* Udagawa: ascospores 18-22 x 11.2-14  $\mu$ , smaller hyaline cells plusminus 1/4 in length.

**Photo**

page 175

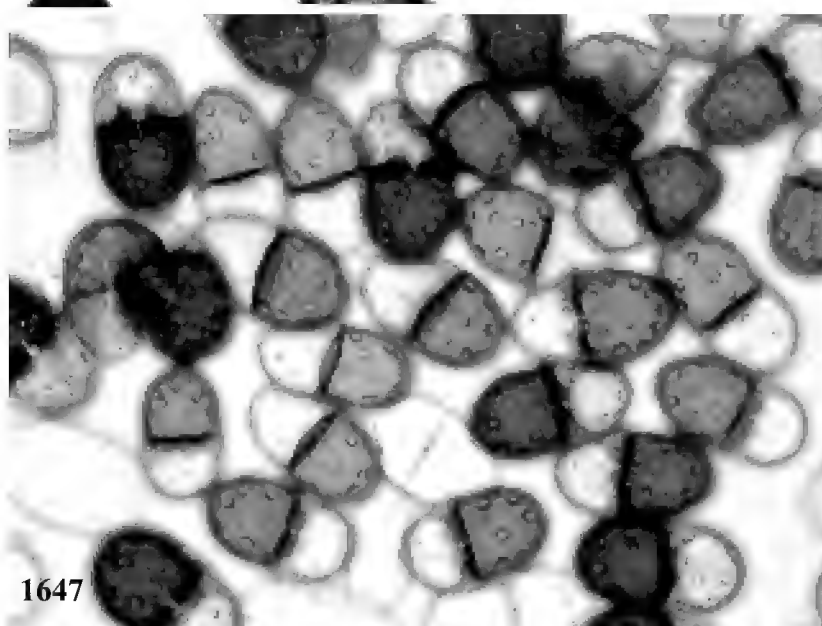
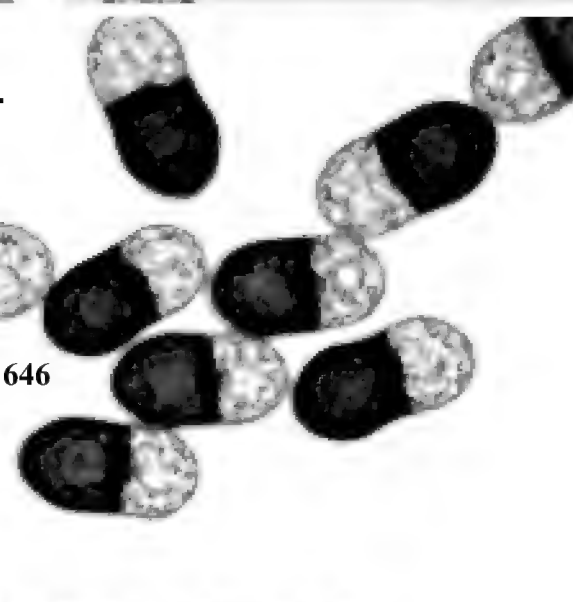
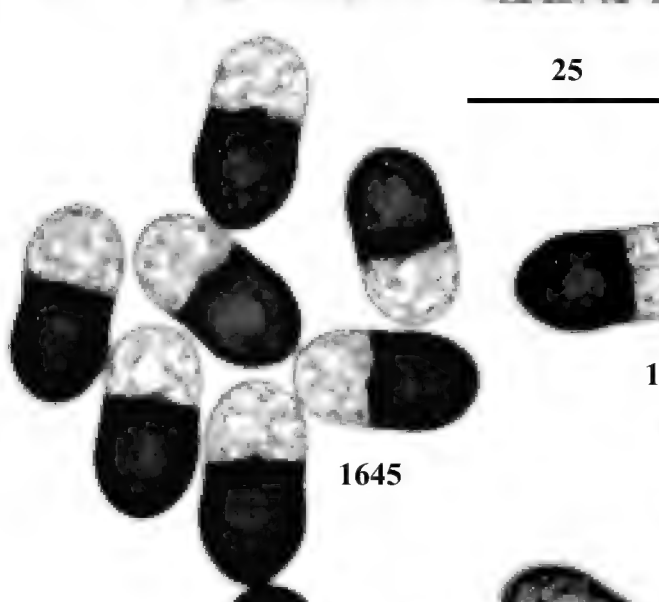
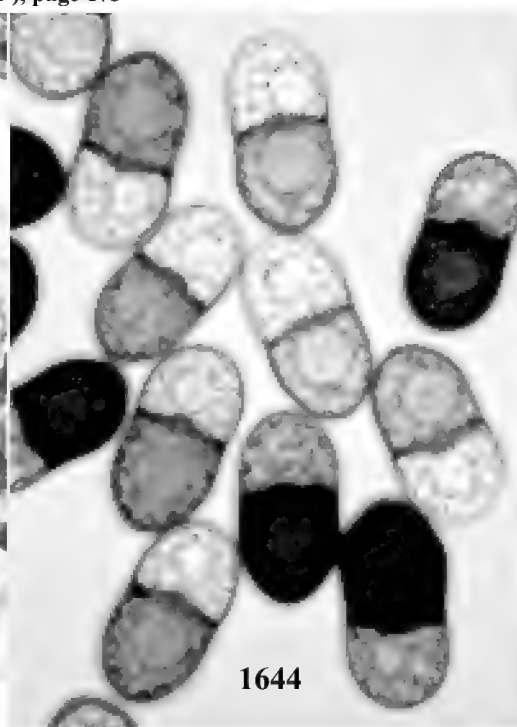
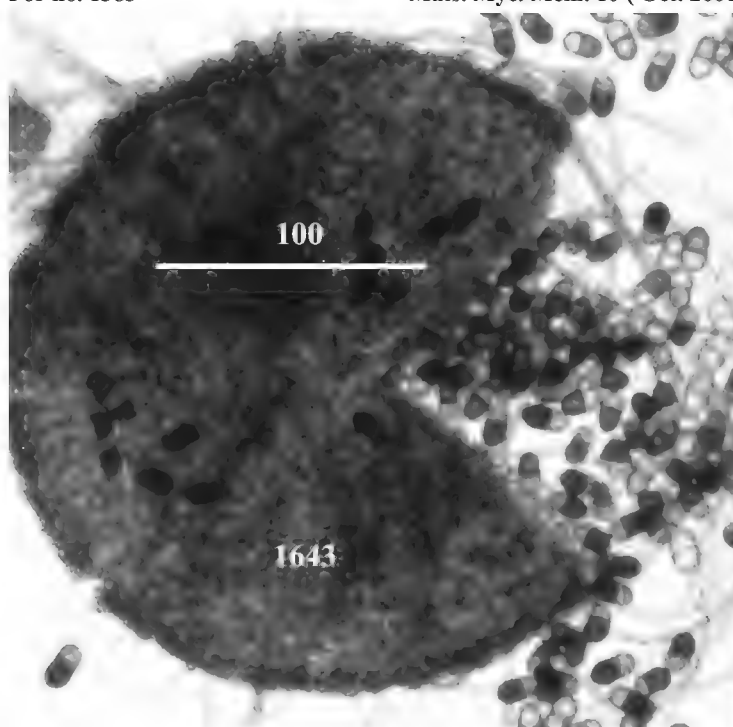
1643 = Mature ascoma gently squashed, from CMA.

1644 = Young ascospores.

1645, 1646 = Near mature ascospores.

1647 = Mature ascospores forced on pits.





**1384 *Lophiostoma fuckelii* Sacc. var. *fuscosporum* var. nov.**

**Descr** Praeter ascosporas etiam in asco brunneas a *Lophiostoma fuckelii* var. *fuckelii* non dissimile.

Coloniae in b/c-medio effusae, hyphis aeriis sparsis, pseudotheciis plusminusve dense dispersis. Pseudothecia dissita ad gregaria, semi-immersa, obpyriformia, 150-300  $\mu$  in diam., peridio membranaceo brunneo, externe vis. textura angulari; collo simili *Lophiostoma fuckelii* Sacc., brevi ostiolo, parte aerea hyphis floccosis albis circumcincto. Pseudoparaphyses abundantes simplices filiformes plusminusve flexuosae frequenter anastomosantes hyalinae septatae, parte basali 3-5  $\mu$  latae, constrictae ad septa, sursum leviter angustae, in parte apicali 1-2  $\mu$  latae. Asci fasciculati, bitunicati, anguste clavati, 75-105  $\mu$  longi, 8-11  $\mu$  lati, pede longo deorsum ad 2  $\mu$  angustascenti, praecipue octospori, interdum tetraspori. Ascosporae fusiformes, medio 1-septatae, etiam vetustate 1-septatae, ad septum constrictae, 15-20 x (4.0-)5-5.5  $\mu$ , crassitunicatae, laeves, utrinque poris germinalibus inconspicuis, in quaque cellula guttulis duabus, brunneae ( etiam in asco brunneae ), maturitate ex ostiolo in massa atera exorientes. Anamorphosis abest.

Coloniae in CMA tenuiter diffusae, hyphis aeriis sparsis, fere incoloratae, circulis concentricis pallide brunneolis, pseudotheciis sporadicis. Anamorphosis deest. **Etym.:** *fuscosporum* <= "ascospores dark colored".

**Hab** Fronde cariosa palmarum in fundo sylvarum densarum; prope Colonia Angamos, Peru ( located at Peru-Brazil border of the Amazon ); July 1994. **Typus:** cultura b/c-medio exsiccata, MFC-4P384.

**Mem** Persimile *Lophiostoma fuckelii* Sacc., *Michelia* 1: 338. 1878; *Syll. Fung.* 2: 678. 1883 / = *Didymosphaeria lophospora* Sacc. & Speg., *Michelia* 1: 376. 1878. Differt ascosporas statu maturo etiam in ascis brunneas.

**Ref** C.G.C. Chesters & A. Bell (1970), *Mycol. Pap.* 120. Studies in the *Lophiostomataceae* Sacc. // *Icones Microfungorum a Matsushima Lectorum*, 1975, p. 74. => *Lophiostoma fuckelii* var. *pulveracea* ( Sacc.) Chesters & Bell, *Lophiostoma inaequalis* Matsushima. // P. M. Kirk (1984), *Mycotaxon* 19: 307-322. => p. 310: *Lophiostoma fuckelii*. // A. Leuchtmann (1985), *Sydowia* 38: 158-170. => Seven *Lophiostoma* spp. were cultured, four spp. formed a *Pleurophomopsis*-like anamorph. // J. Mouchacca (1987), *Cryptogamie, Mycol.* 8: 141-158. => p. 155: *Lophiostoma fuckelii* var. *pulveraceum*. // L. Holm & K. Holm (1988), *Acta Univ. Ups. Symb. Bot. Ups.* 28 (2). Studies in the *Lophiostomataceae* with emphasis on the Swedish species.

**Photo**

page 177

1648 = Habit on b/c-medium. Pseudothecia, aerial part covered with white hyphae.

1649, 1650, 1651 = Young asci and paraphyses. ( by phase contrast )

1652 = Basal part of mature ascus. ( by phase contrast )

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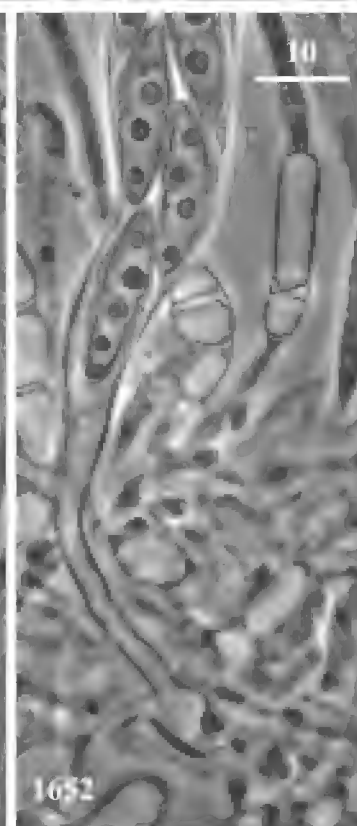
1653, 1654 = Mature asci and paraphyses. ( by phase contrast )

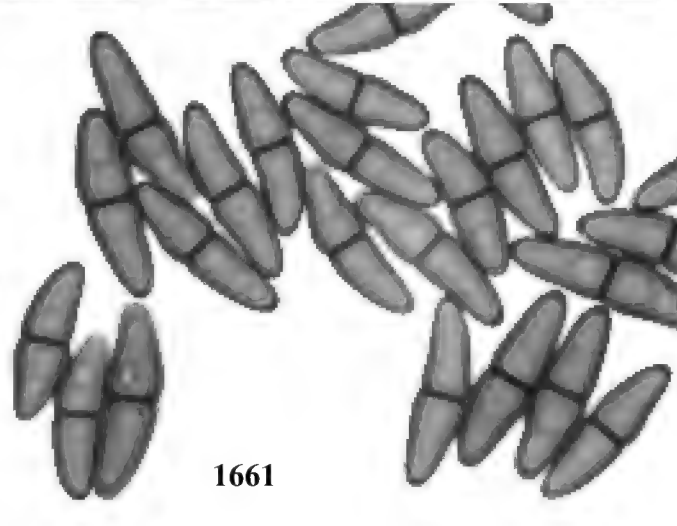
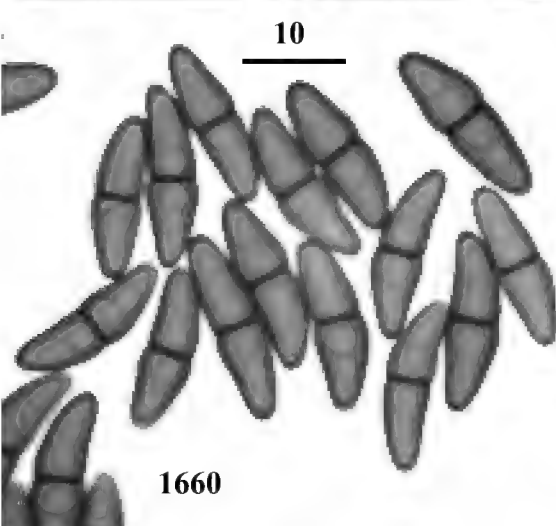
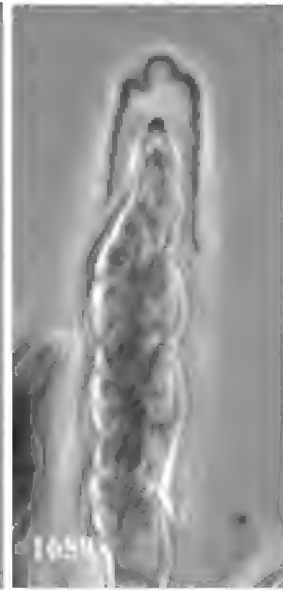
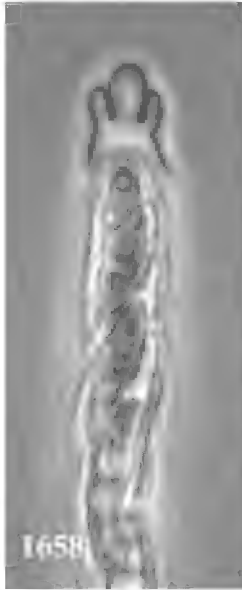
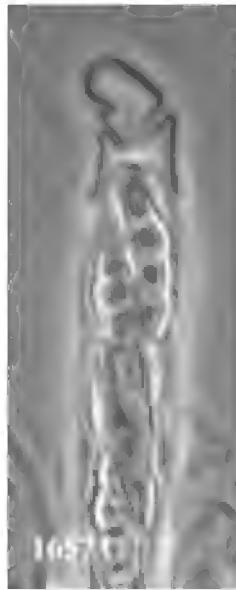
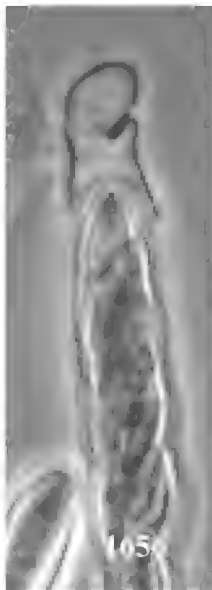
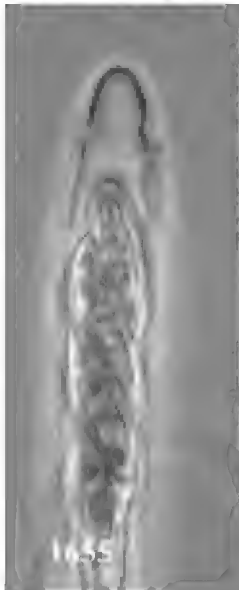
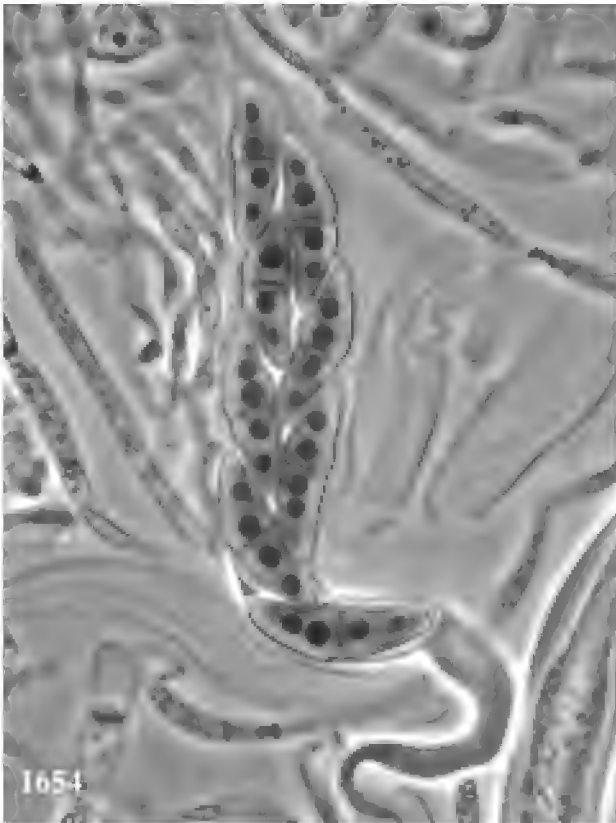
1655, 1656, 1657, 1658, 1659 = Asci, showing bitunicate nature. ( by phase contrast )

1660, 1661 = Ascospores.

page 211 ( color plate )

1813 = Habit on b/c-medium. Pseudothecia, aerial part covered with white hyphae.





*Ascoronospora* gen. nov.

Pseudothecia non stromatica, superficialia ad semi-immersa, obpyriformia, atro-brunnea, pilosa setosa, collo brevo periphysato: peridium membranaceum, aspectu superficiali textura angulari, brunneum; pili sinuati crassitunicati verrucati brunnei; setae e cellulis extimis peridii exorientes, rectae rigidae septatae laeves brunneae. Asci bitunicati cylindro-fusiformes, apice obtusi, pede angusto sinuato, plusminusve biseriate vel irregulariter octospori. Paraphyses filiformes sinuatae ramosae septatae anastomosantes hyalinae. Ascosporae cylindro-fusiformes, 0-2 fere 1-septatae, non vel leviter constrictae ad septum, contento maxime guttulado, laeves, hyalinae.

Anamorphosis: *Coronosporae* cf. *C. uniseptata* Matsushima (1985). *Etym.*: *ascoronospora* <= asco ( ascomycete ) + *Coronospora*.

**1385 *Ascoronospora yakuensis* sp. nov.**

**Descr** Coloniae in b/c-medio diffusae, fere sine hyphis aeriis, sub lente peritheciis dispersis ut in punctis fuscis. Pseudothecia non stromatica, dissita ad 2-3 gregaria, superficialia ad 1/3 immersa, obpyriformia, 250-560  $\mu$  alta, 165-375  $\mu$  diam., atro-brunnea, pilosa, setosa, collo brevo periphysato: peridium membranaceum, aspectu superficiali textura angulari, modice brunneum ad brunneum, extime parte carbonaceum secus septa; pili sinuati, crassitunicati, verrucati, 2-3  $\mu$  lati, modice brunnei; setae e cellulis extimis peridii exorientes, fere rectae, rigidae, 135-280  $\mu$  longae, 4-6.5  $\mu$  latae, apicem versus non angustae, septatae, laeves, brunneae, prope apicem pallidiorae, apice obtusae. Asci bitunicati, cylindro-fusiformes, 93-100  $\mu$  longi, 12-15  $\mu$  in parte latissima, apice obtusi 6-6.5  $\mu$  lati, pede angusto sinuato, plusminusve biseriate vel irregulariter octospori. Paraphyses filiformes sinuatae septatae ramosae anastomosantes hyalinae, 1.5-2.5  $\mu$  latae. Ascosporae cylindro-fusiformes, utrinque rotundatae, (21.5-) 24-30(-32.5) x (6-)7-9.5  $\mu$ , 0-2 fere 1 septo, quo ob contentum maxime guttulatum difficulter observo, non vel leviter constrictae ad septum, laeves, hyalinae, maturitate in massa alba exorientes, in sicco pallide salmoneae in massa.

Anamorphosis: *Coronospora* species, quae *Coronosporae uniseptatae* Mats. (1975) persimilis, differt latitudine conidiorum. Conidia obovata, 21-24 x 11-13  $\mu$ , 1-septata, apice fere sine corniculis, raro obscure corniculata. *Etym.*: *yakuensis* <= type locality of this fungus.

**Hab** E minutis cariosis fragmentis plantarum in fundo sylvae ( arbores dicotyledonum ); Yaku Island, Kagoshima Pref., Japan; June 1997. **Typus**: cultura b/c-medio exsiccata, MFC-21086.

**Mem** The following *Coronospora* species were described me: *Coronospora dendrocalami* M. B. Ellis (1971), Mycol. Pap. **125**: 17; Mats. Myc. Mem. **1**: p.19, no. 54. 1980; Mats. Myc. Mem. **8**: p.45, 1995. / *Coronospora uniseptata* Matsushima (1975), in Icones microfungorum a Matsushima lectorum. p. 40. => conidia obovata, 22-26 x 14-18  $\mu$ , 1-septata. apice 5-6 corniculis. / *Coronospora novae-zelandiae* Matsushima (1985), in Mats. Myc. Mem. **4**, p. 5, no. 395. In these species it is experienced that *tempore* the conidia have a tendency to become non-coronate.

**Photo**

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1662, 1663, 1664 = Conidia from CMA. ( 1662, 1663 by phase contrast )

1665, 1666, 1667 = Perithecia on b/c-medium.

1668 = Part of perithecial peridium, showing textura angularis.

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1669 = Warty and sineous perithecial hairs.

1670, 1671, 1672, 1673 = Asci and paraphyses, from squashed mount. ( by phase contrast )

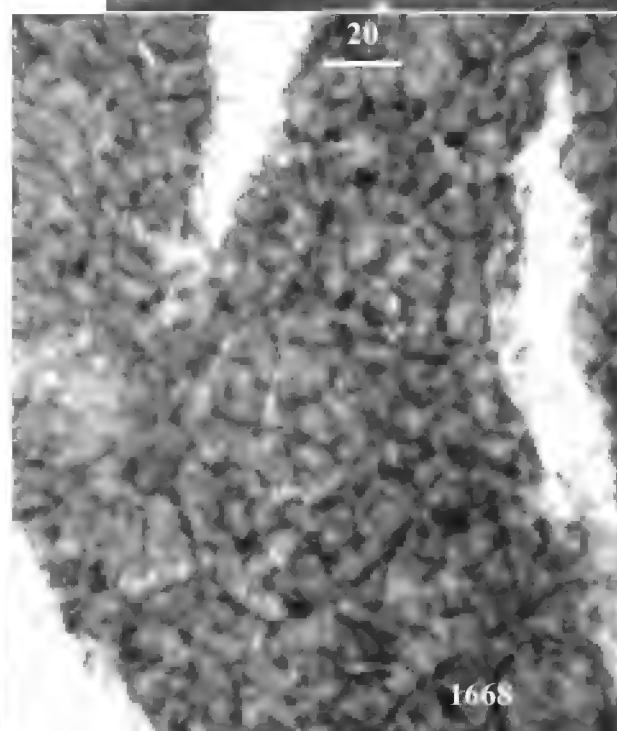
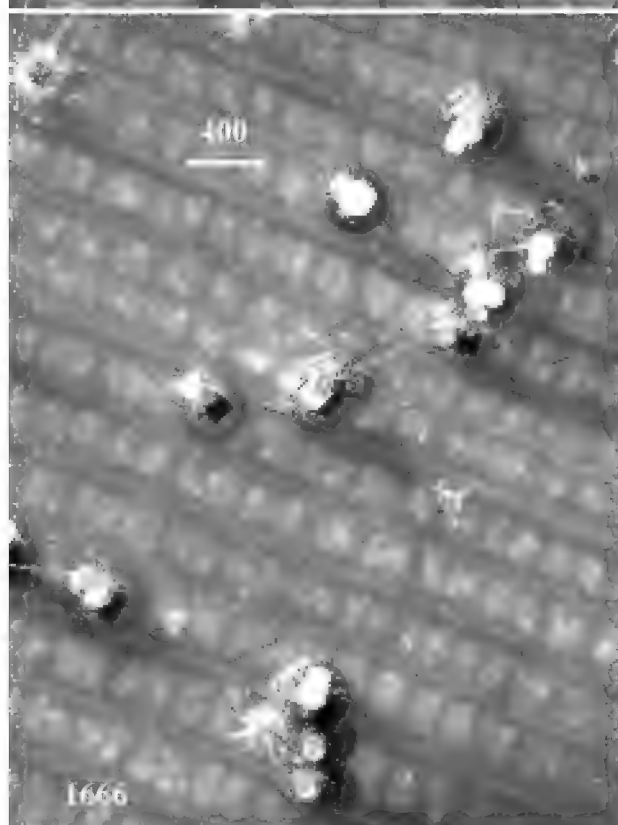
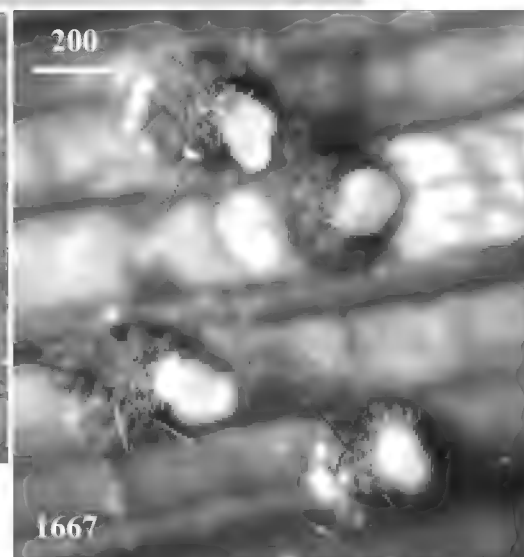
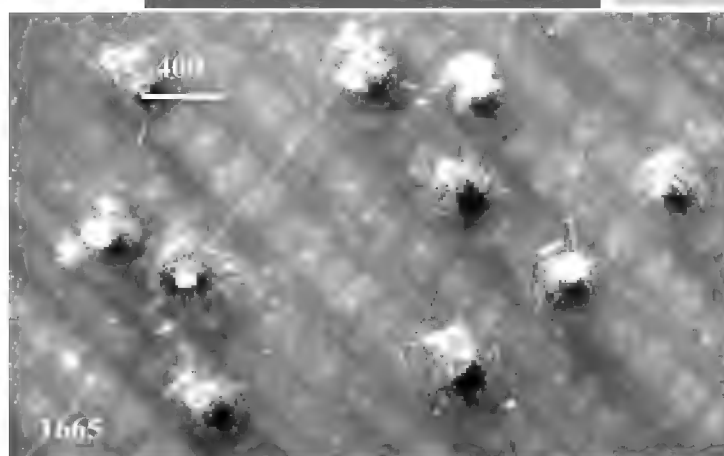
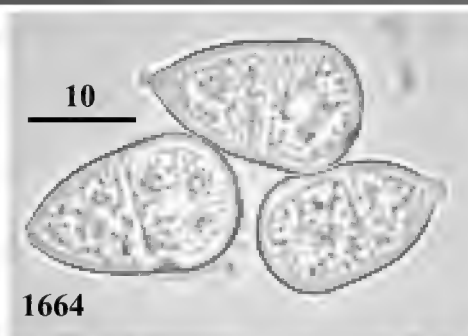
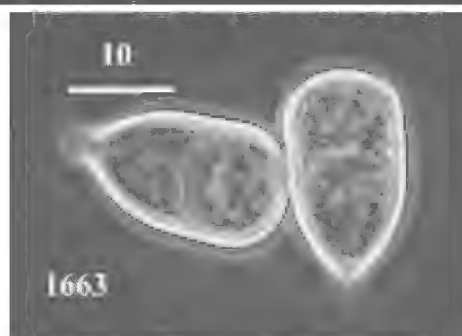
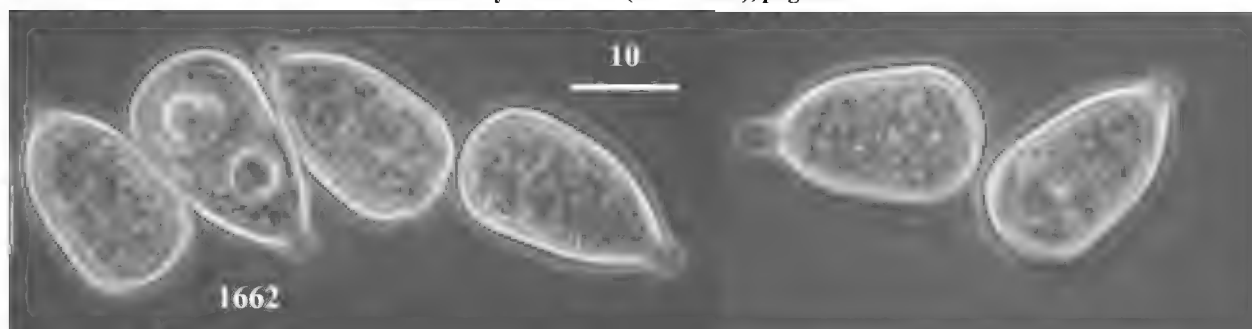
page 182

1674, 1675 = Paraphyses. ( by phase contrast )

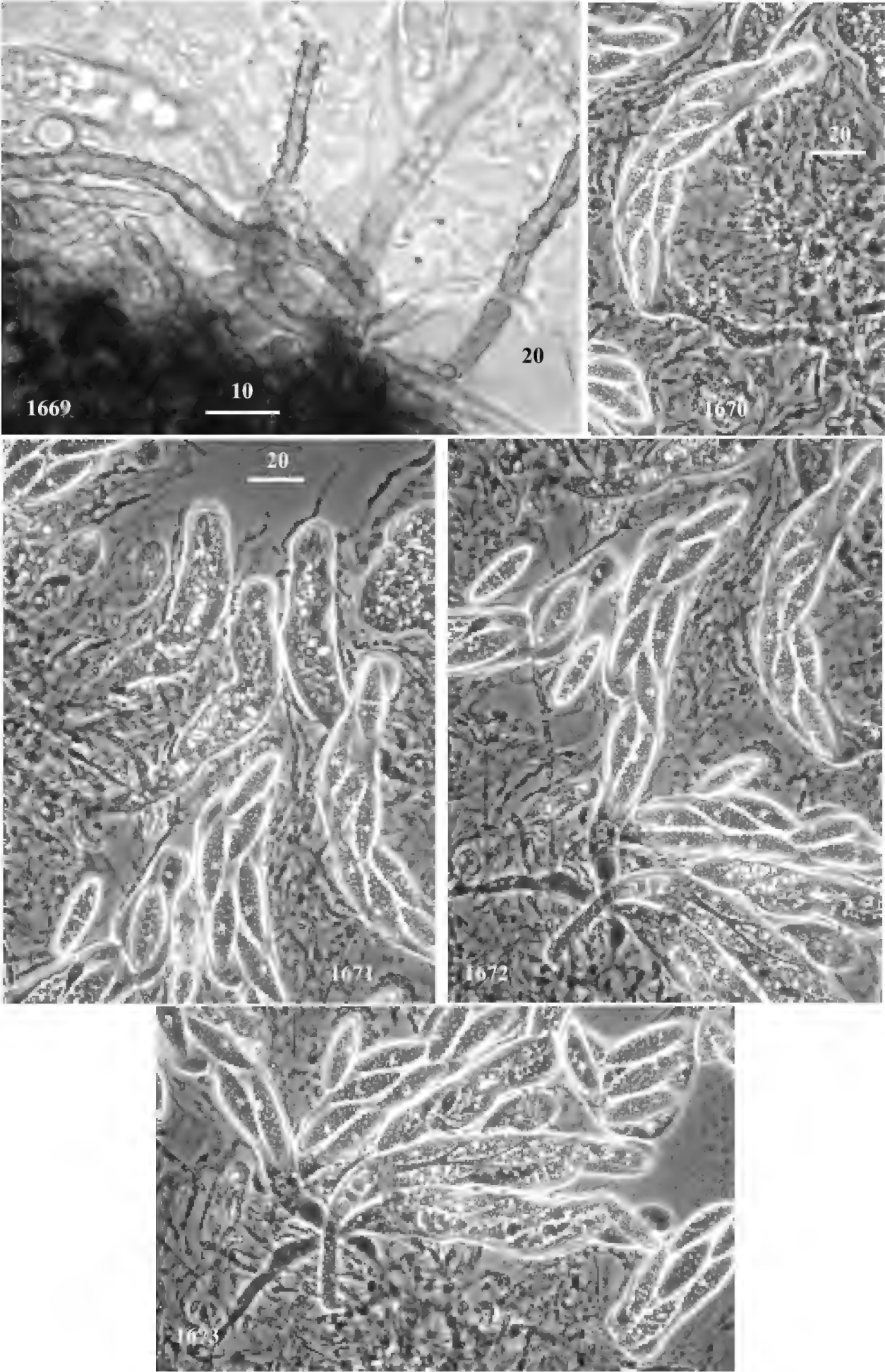
1676, 1677 = Oozed out ascospores. ( by phase contrast )

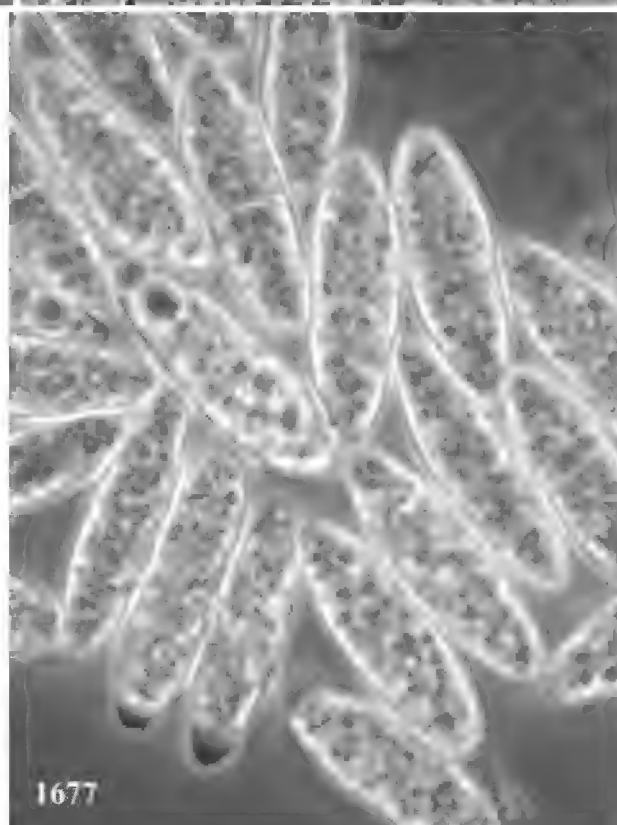
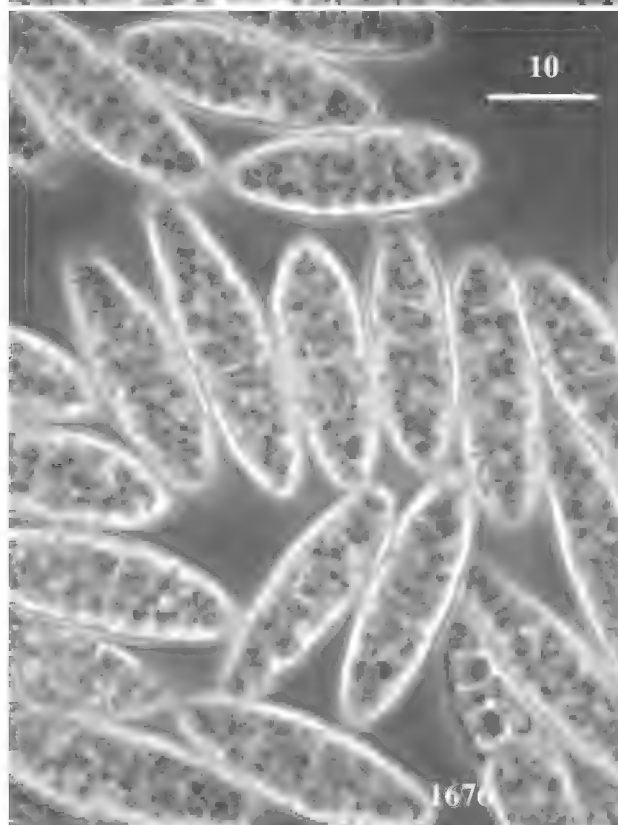
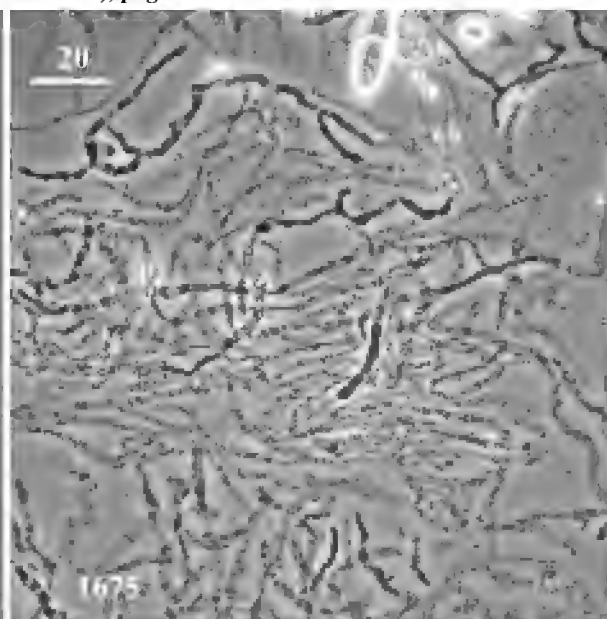
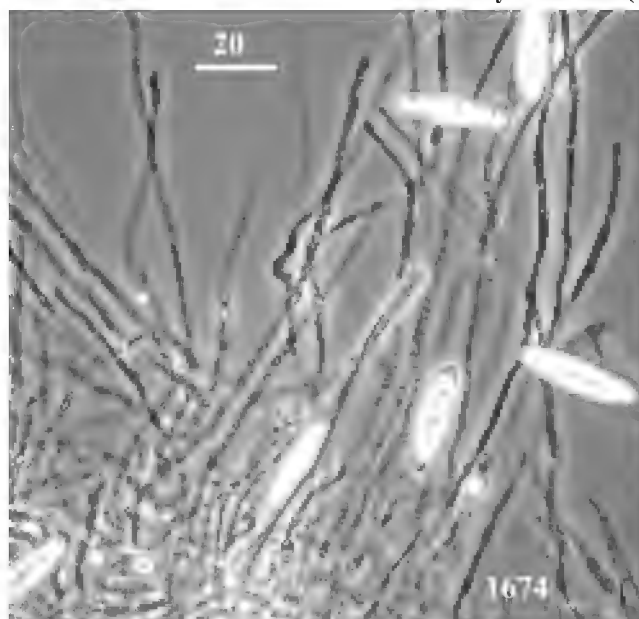
page 212 ( color plate )

1817, 1818, 1819 = Perithecia on b/c-medium.









**1386 *Boerlagiomyces websteri*** Shearer et Crane (1995), Mycologia **87**: 876.

**Descr** In hospite: Pseudothecia obpyriformia, dissita, fere superficialia vel semi-immersa, parte aerea setifera, ostiolo periphysato; peridio modice brunneo, externe vis. textura angulari. Asci bitunicati, cylindrici brevi-stipitati, initio praecipue tetraspori, maturitate fere bispori, raro tetraspori. Ascosporae muriformes, 65-100 x 24-35  $\mu$ , praecipue transverse 9-septatae, segmentis terminalibus minutis, in quoque segmento longitudinaliter 2-4, praecipue 3-septatae, brunneae, laeves.

**Hab** MFC-21076. Carioso ramunculo indet. arboris dicotyledonis in fundo sylvae; Kobe Municipal Arboretum, Kobe, Japan; Sept 2000.

**Ref** V. G. Rao & K. I. M. Varghese (1979). Sydowia **32**: 252-259. p. 254-255. => *Boerlagiomyces macrosporus* sp. nov. // D. L. Hawksworth (1980), Trans. Br. mycol. Soc. **74**: 363-386. => p. 378-379: *Norrinia peltigericola* (Nyl.) Theiss. & Syd. has asci with two hyaline muriform spores. // C. A. Shearer & J. L. Crane (1995), Mycologia **87**: 876-879. => p. 876: *Boerlagiomyces websteri* sp. nov. ascosporis 66-92(-107) x 26-35  $\mu$ . // S. J. Stanley & K. D. Hyde (1997), Mycol. Res. **101**: 635-640. => p. 635: *Boerlagiomyces grandisporus* n. sp. / p. 640: *Boerlagiomyces lacunosispora* (K. D. Hyde) S. J. Stanley & K. D. Hyde, comb. nov. // J. L. Crane, C. A. Shearer & M. E. Barr (1998), Canad. J. Bot. **76**: 602-612. A revision of *Boerlagiomyces* with a notes and a key to the saprobic genera of *Tubeufiaceae*. => p. 605: key to six spp. of *Boerlagiomyces*; *B. velutinus*, *B. laxus*, *B. effusus*, *B. grandisporus*, *B. lacunosisporus*, and *B. websteri*. / p. 611-612: key to saprobic genera of *Tubeufiaceae*.

**Photo**

page 184

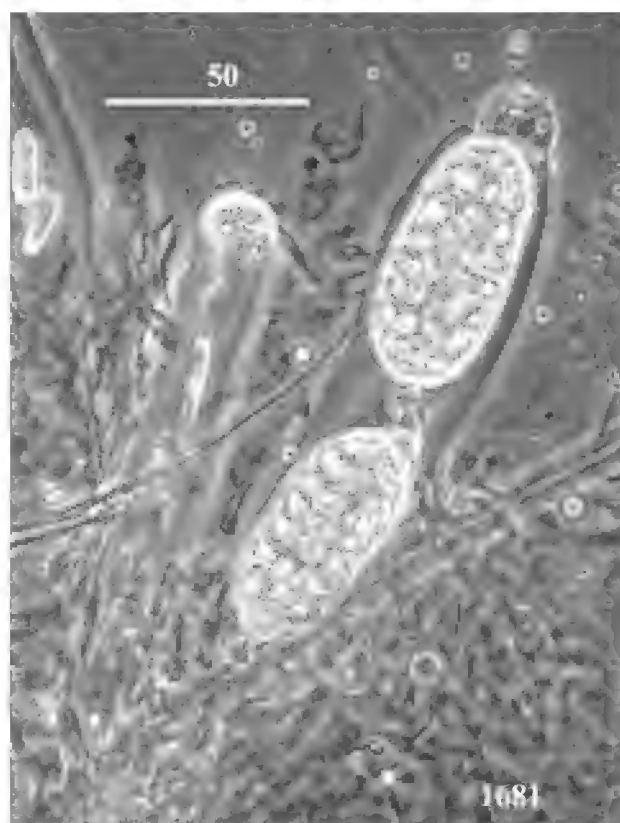
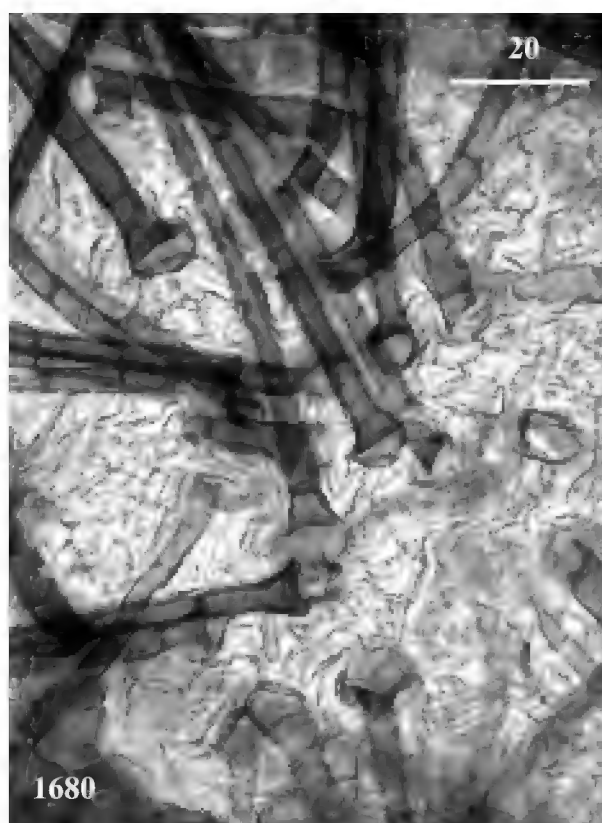
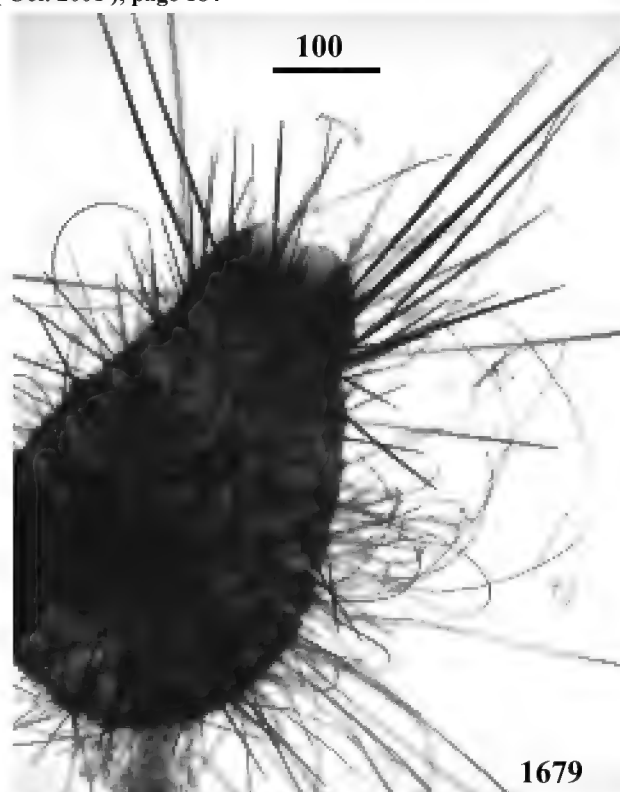
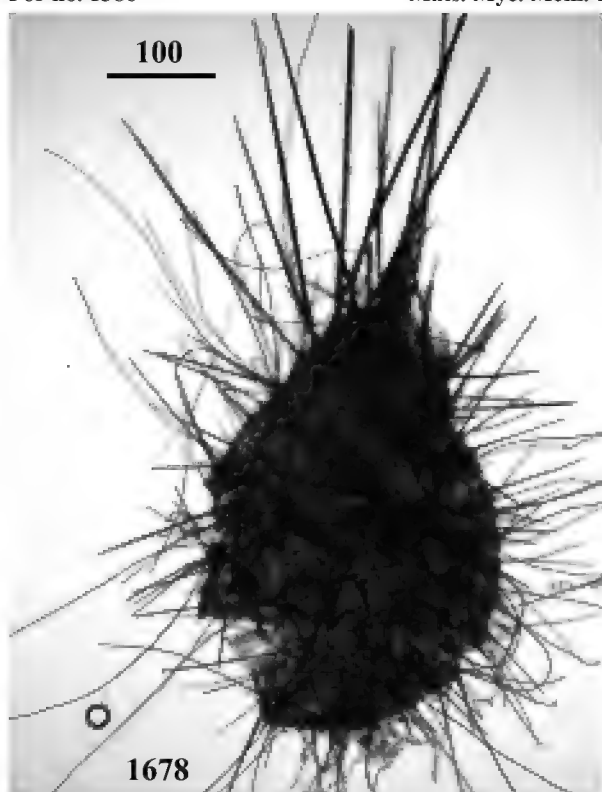
1678, 1679 = Pseudothecia from the specimen.

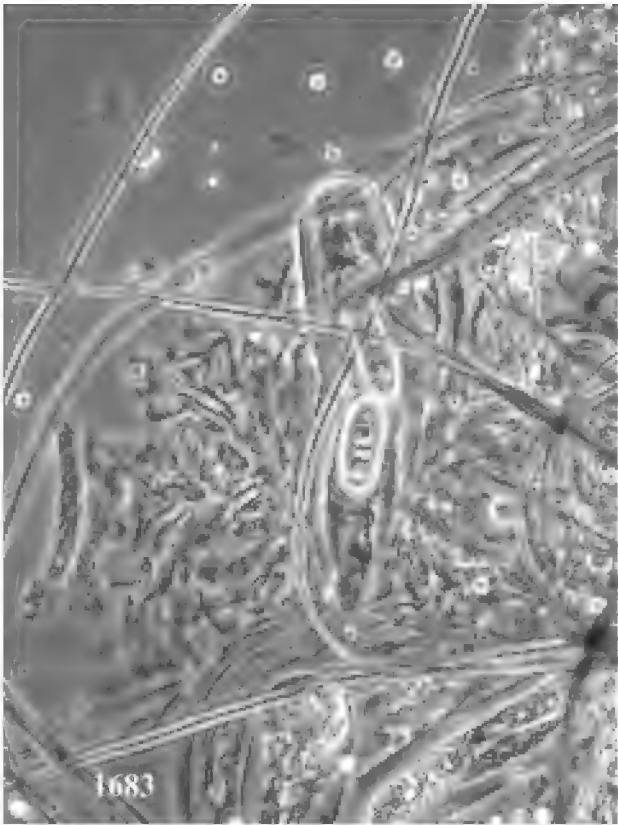
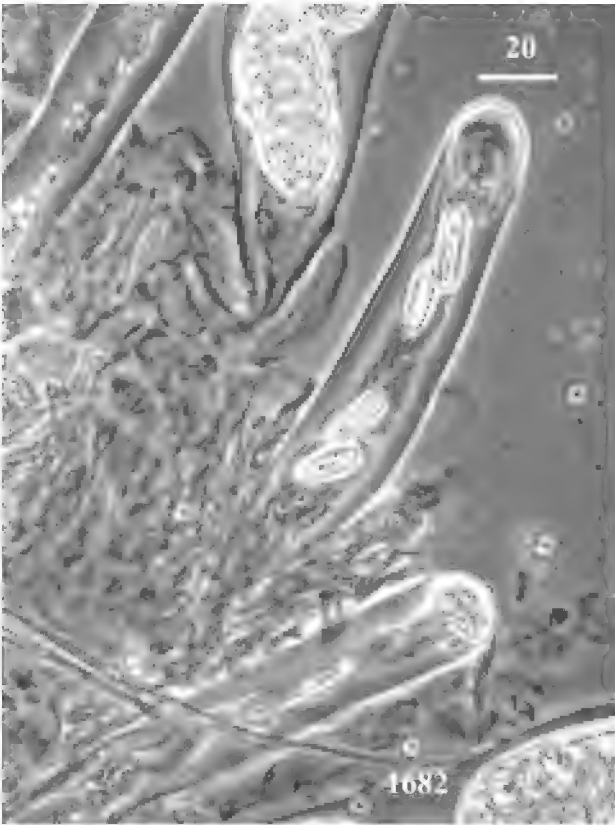
1680 = Basal part of setae.

1681 = Asci. ( by phase contrast )

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1682, 1683, 1684, 1685 = Asci. ( by phase contrast )





**1387 *Extrusothecium kobense* sp. nov.**

**Descr** Coloniae in b/c-medio effusae, sine hyphis aeriis, pseudotheciis fuscis dispersis. Pseudothecia subepidermalia, globosa, non-ostiolata, 75-125(-160)  $\mu$  in diam., glabera, brunnea; pariete brunneo unistrato, externe vis. cellulis angulari, in sectione cellulis complanatis. Pseudothecia prope maturitatem supra rumpentia et protrusa totis contentis, quae pseudoparenchymatica gelatinosa hyalina sub lente alba, contenta aliquot ( in numero parvo ) ascis. Asci succati, basi protrudine parva, bitunicati, octospori, interdum tetraspori vel minus quam tetraspori, maturitate ascosporis ejecti. Ascosporae ejectae ellipsoideae, (25-)28-35(-38) x 11-12.5(-14)  $\mu$ , (3-)4(-5) transverse septis et uno septo longitudinali in 1-2 sectionibus centralibus, non vel leviter ad septa constrictae, laeves, maturitate in ascis hyalinae ad subhyalinae, mucro involutae. Ascosporae ejectae initio hyalinae ad subhyalinae, vetustate pallide brunneae. Anamorphosis ignota.

Colonae in CMA diffusae, modice crescentes, fere sine hyphis aeriis, pseudotheciis abundanter dissitis ad gregariis. Pseudothecia in agaro immersa, globosa glabera atrobrunnea, in magnitudine variabilia 85-200  $\mu$  diam. Anamorphosis ignota. **Etym.**: *kobense* <= the type locality of this fungus.

**Hab** Carioso ramunculo indet. arboris monocotyledonis; Kobe Municipal Arboretum, Kobe, Japan; Nov. 1999. **Typus**: cultura b/c-medio exsiccata, MFC-21059.

**Mem** The new species is close to *Leptosphaerulina australis* McAlpine (1902), but differs from the latter in the pushing-out of whole hamathecium at near maturation of pseudothecia. // The present species is similar to *Extrusothecium cafferum* Matsushima, type species, in Mats. Myc. Mem. **9**: p. 10. no. 1269 (1996), but differs from the latter in ascospore morphology. In *E. cafferum* asci cylindrical, ascospores 20-25 x 9-12.5  $\mu$ , transversely 3-septate, with one longitudinal septum in each segment.

**Ref** J. H. Graham & E. S. Luttrell (1961), *Phytopathology* **51**: 680-693. => Species of *Leptosphaerulina* on forage plants. => Six species described including *L. australis*, *L. arachidicola*, *L. briosiana*, *L. trifolii*, *L. americana*, and *L. argentinensis*; with a key to species. / *L. australis*. On hosts: ascospores 25-41 x 10-15  $\mu$  ( mean 32.4-35.3 x 12.0-14.0  $\mu$  ), 3-6 x 1-3-septate ( mean 3.6-4.0 x 1.3-2.3 ), 100 % muriform. In cultures: ascospores 29-41 x 11-15  $\mu$  ( mean 33.0-37.7 x 12.6-13.9  $\mu$  ), 3-5 x 0-4 septate ( mean 3.9-4.1 x 1.7-2.3 ), 96-100 % muriform. // P. N. Rao & D. Karan (1964), *Mycopath. mycol. appl.* **22**: 91-95. Some new hosts of *Leptosphaerulina* McAlp. from India. // T. Matsushima (1971), *Microfungi of the Solomon Islands and Papua New Guinea*. => p. 74, Fig. 167-4, Pl. 48-1, 48-2: *Leptosphaerulina australis*. // J. A. von Arx & E. Mueller (1975), *Stud. Mycol.* **9**: p. 88-89. // C. Roux (1986), *Trans. Br. mycol. Soc.* **86**: 319-323. *Leptosphaerulina chartarum* sp. nov., the teleomorph of *Pithomyces chartarum*.

**Photo**

page 187

1686 = Habit, pseudothecia on b/c-medium, immersed. Three weeks old.

1687 = Habit, pseudothecia on b/c-medium, immersed. Two weeks old.

1688 = Pseudothecia on b/c-medium, gently taken out from the medium, almost not pressed.

1689, 1690, 1691 = Pseudothecia on b/c-medium, gently taken out from the medium, almost not pressed. Almost all content pushed out.

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1692 = Immersed young pseudothecium from CMA, taken out, ruptured by gentle pressure.

1693 = Hamathecium, textura angularis.

1694 = Peridium, in surface view.

1695 = Ascus in pseudoparenchymatous hamathecium, from squashed pseudothecium.

1696, 1697 = Asci.

1698 = Ascus, pressed.

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1699 = Ascus showing bitunicate nature.

1700, 1701, 1702 = Ascospores.

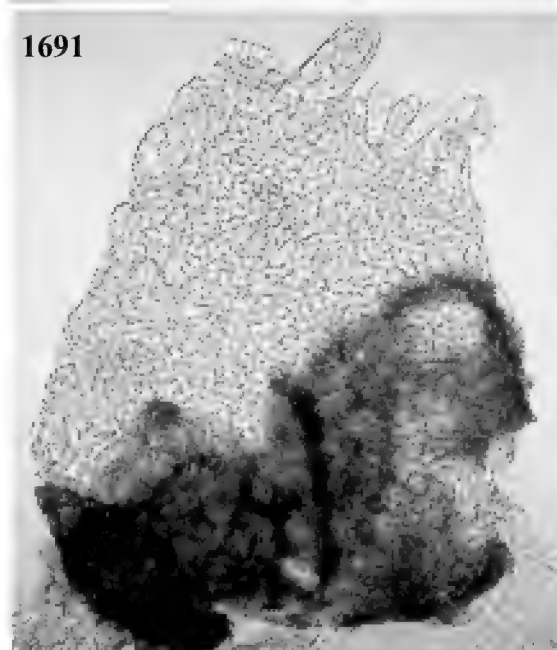
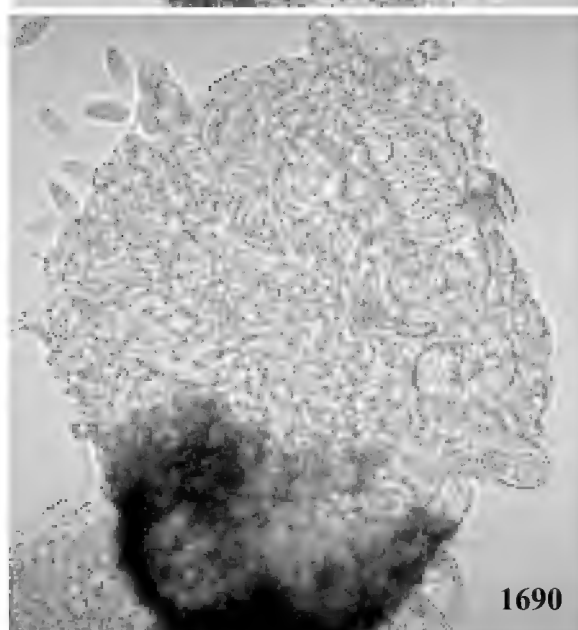
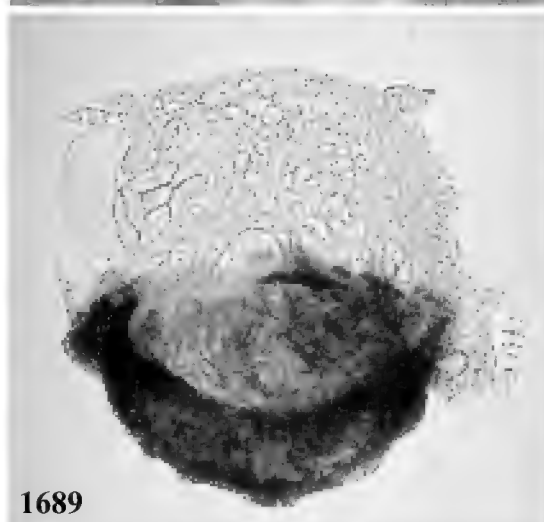
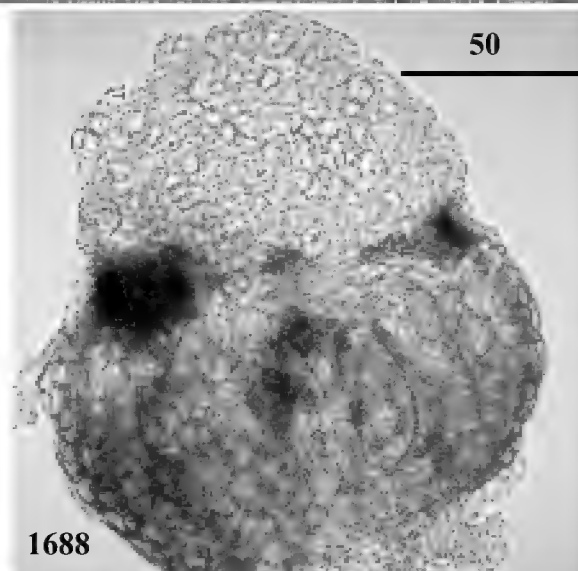
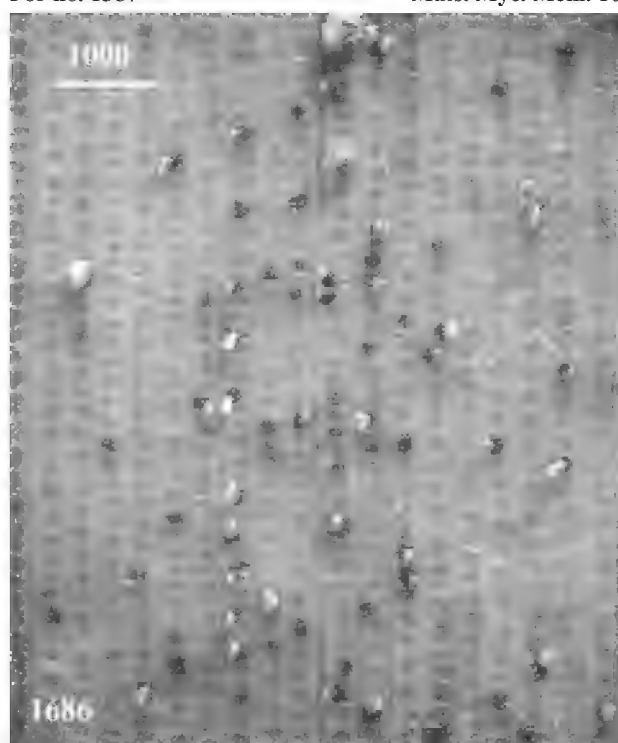
page 212 ( color plate )

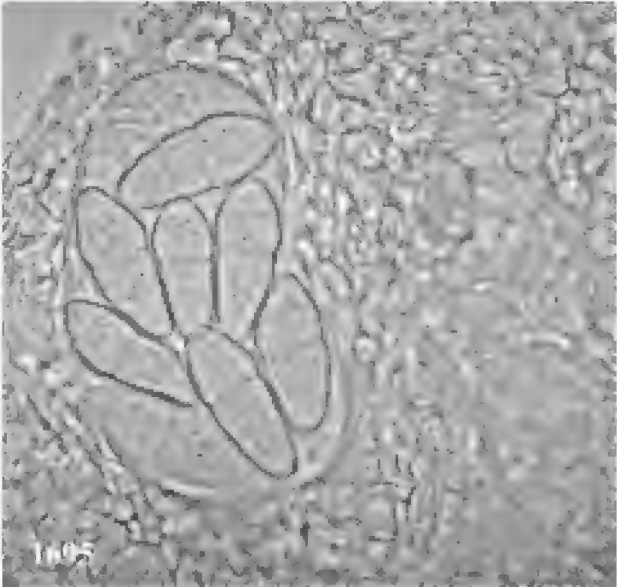
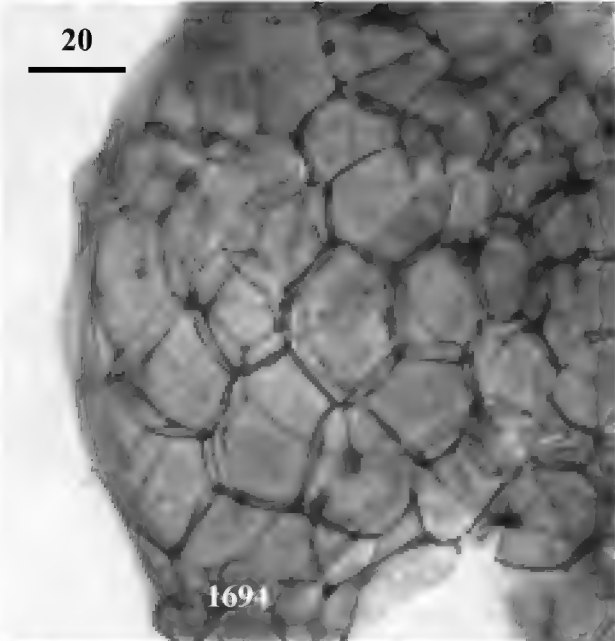
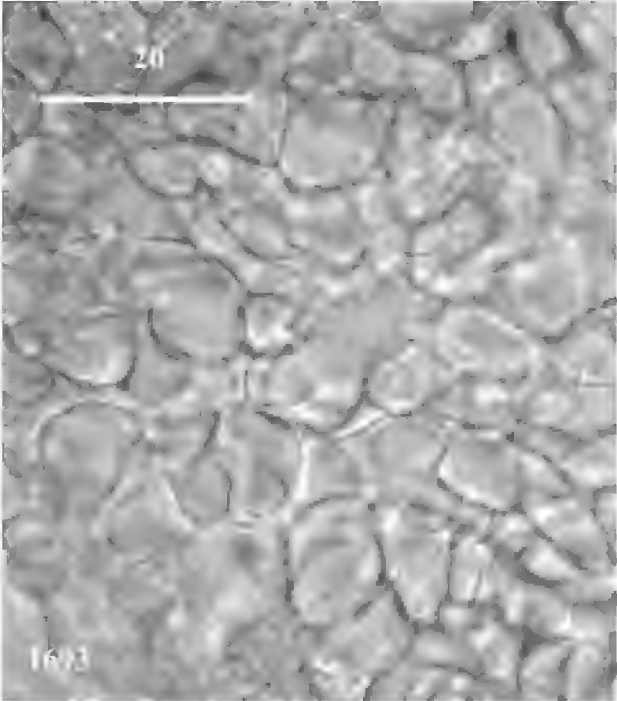
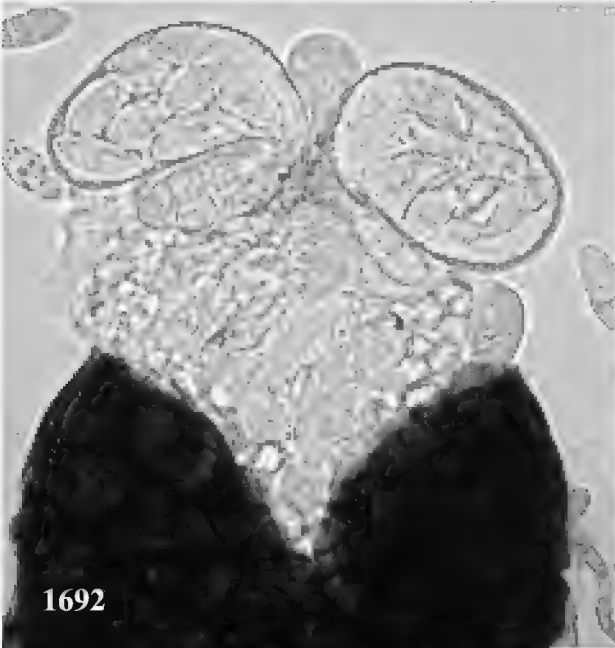
1820 = Habit, pseudothecia on b/c-medium, immersed. Three weeks old.

page 213 ( color plate )

1821 = Habit, pseudothecia on b/c-medium, immersed. Two weeks old.









*Ascofascicula* gen. nov.

Hyphae vegetativae ramosae septatae laeves hyalinae. Stromata superficialia, dispersa, initio plusminusve globoidea alba sclerotioidea pseudoparenchymatosa, postea asci et paraphyses a superna pagina stromatis simul oriundae, strati hymeniales formati. Maturitate ascomata (= infra stromata sclerotioidea + supra strata hymenialia) ab apice visa circularia, a latere visa cylindrica ad cupulata, alba vel straminea; excipulum marginale ad heimenium deficiens. Asci clavati ad cylindro-clavati, pede brevo, unitunicati, sine apparato apicali, typice octospori, interdum minus quam octospori sine vel cum nanis, maturitate per refringentem apicem ascosporis liberati; paraphyses filiformes, apice balde inflatae. Ascosporae ellipsoideae unicellulares incoloratae. Anamorphosis ignota. **Etym.:** *ascofascicula* <="asci fasciculate" on stroma. Species typica postero sectione.

**1388** *Ascofascicula talaroluteoides* sp. nov.

**Descr** In b/c-medio et CMA: Coloniae modice diffusae, brunneoalbae, hyphis aeriis pauperis. Hyphae vegetativae ramosae septatae laeves hyalinae, 1-4.5  $\mu$  latae. Stromata superficialia, dissita ad gregaria, primo plusminusve globoidea alba sclerotioidea pseudoparenchymatosa, e cellulis angularibus 4-7  $\mu$  diam. composita, postea asci et paraphyses in superna pagina stromatis simul oriundae, strati hymeniales formati; maturitate ascomata (= infra stromata sclerotioidea + supra strata hymenialia) ab apice visa circularia 50-165  $\mu$  diam., a latere vis. cylindrica ad cupulata 85-140  $\mu$  alta, alba ad straminea; excipulum marginale ad hymenium deficiens vel raro postea excipulum marginale una cellula crassum e stromate basali sursum parte et imperfecte formata, ex cellulis hyalinis subglobosis ad plusminusve angularibus 10-20  $\mu$  diam. compositum. Asci clavati ad cylindro-clavati, 30-40 x 8-12  $\mu$ , pede brevo, basi ad 2.5-4  $\mu$  angustati, unitunicati, sine apparato apicali, typice octospori, interdum minus quam octospori, sine vel cum nanis, interdum 4 normalibus et 4 nanis; maturitate per refringentem apicem ascosporae liberatae; paraphyses ascis commixtae, in numero minores quam asci, filiformes 1-2  $\mu$  latae, apice balde ad 3.5-7  $\mu$  inflatae. Ascosporae ellipsoideae ad ellipsoideo-fusiformes, 7-9 x 4.5-5  $\mu$ , incoloratae, in pagina cum 4-5 transverse obliqueve cristis spiralibus (similes ascosporas *Talaromyces lutei*); ascosporae nanae ellipsoideae, 4-5 x 2.5-3  $\mu$  vel 3.5-4  $\mu$  diam, laeves ad fere laeves. Ascomata abundante et cito formata, in 10 dies maturascentia, initio alba, postremo pallide brunneascentia. Chlamydosporae nullae. Anamorphosis desunt. In PDA sterilis.

**Etym.:** *talaroluteoides* <= colony appearance and ascospores surface ornamentation "reminiscent of *Talaromyces luteus*".

**Hab** E solo sylvae (arbores dicotyledonum); Okayama Arboretum, Okutsu-cho, Okayama Pref., Japan; Aug. 1999. **Typus:** cultura b/c-medio exsiccata, MFC-21063.

**Photo**

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1703, 1704 = Habit. Ascomata on CMA.

1705, 1706, 1707 = Ascoma initial on CMA. (by phase contrast)

1708, 1709, 1710, 1711, 1712 = Sclerotium-like ascoma-primordia on CMA. (1710, 1712 by phase contrast)

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1713, 1716 = Young ascomata. (by phase contrast)

1714, 1715, 1717 = Maturing ascomata. (by phase contrast)

1718, 1719 = Ascomata, hymenia flaring-out by gentle pressure.

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1720 = Ascoma, gently pressed, in lateral view.

1721 = Ascoma, gently pressed, in top view.

1722 = Ascoma, gently pressed, in top view.

1723 = Ascoma, gently pressed. in bottom view.

1724 = Young ascoma, in lateral view.

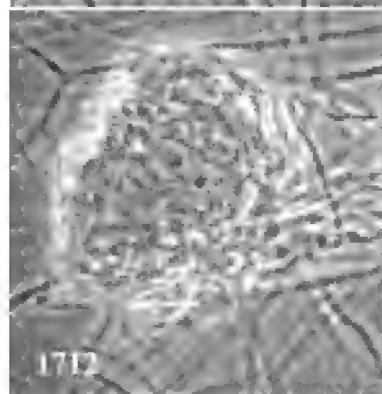
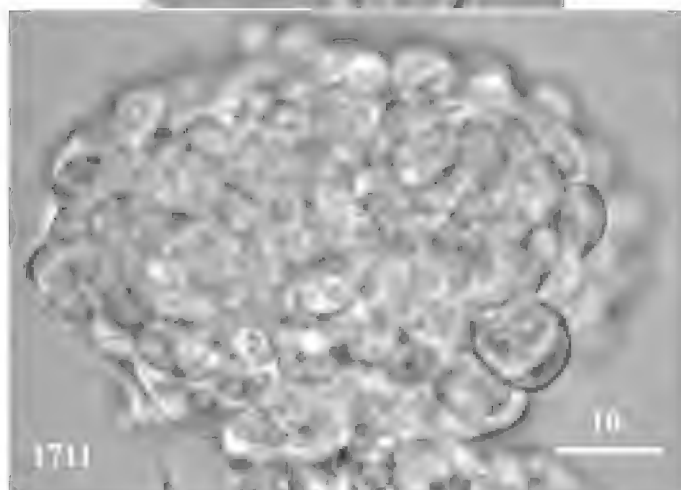
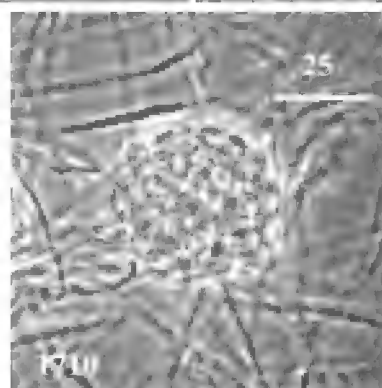
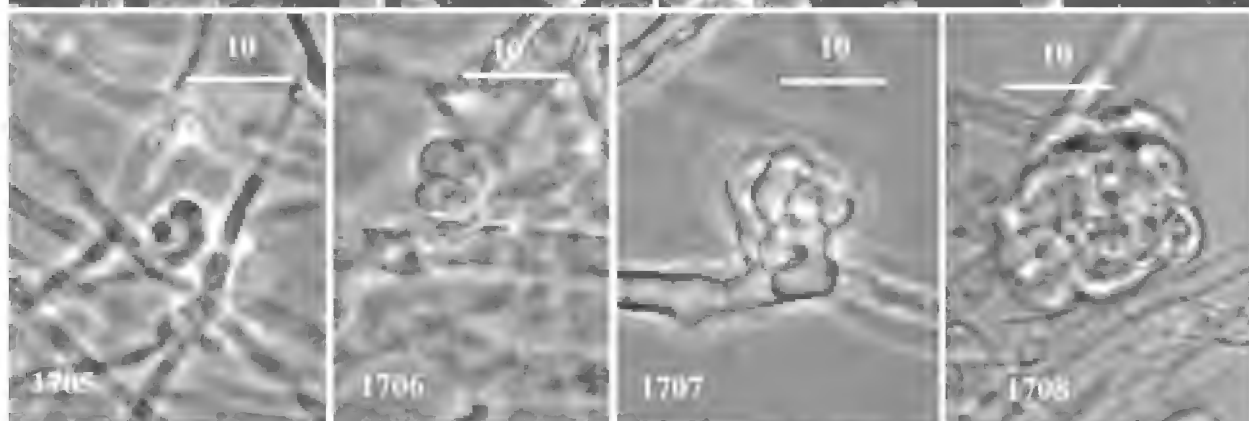
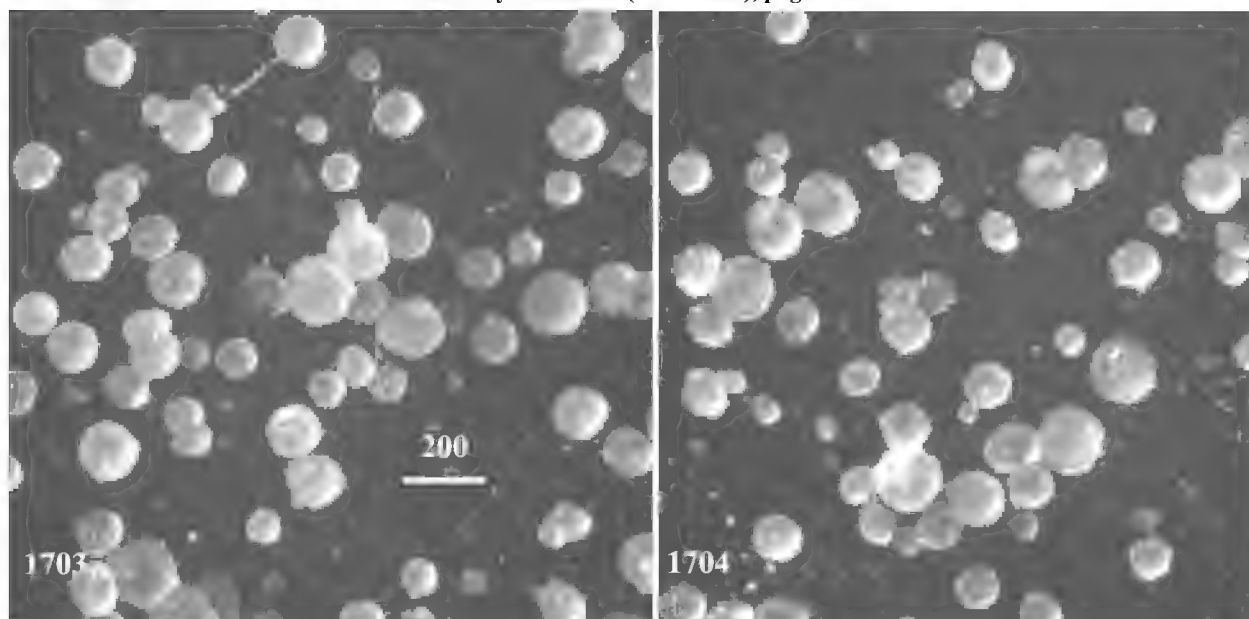
1725 = Two small ascomata, in lateral view.

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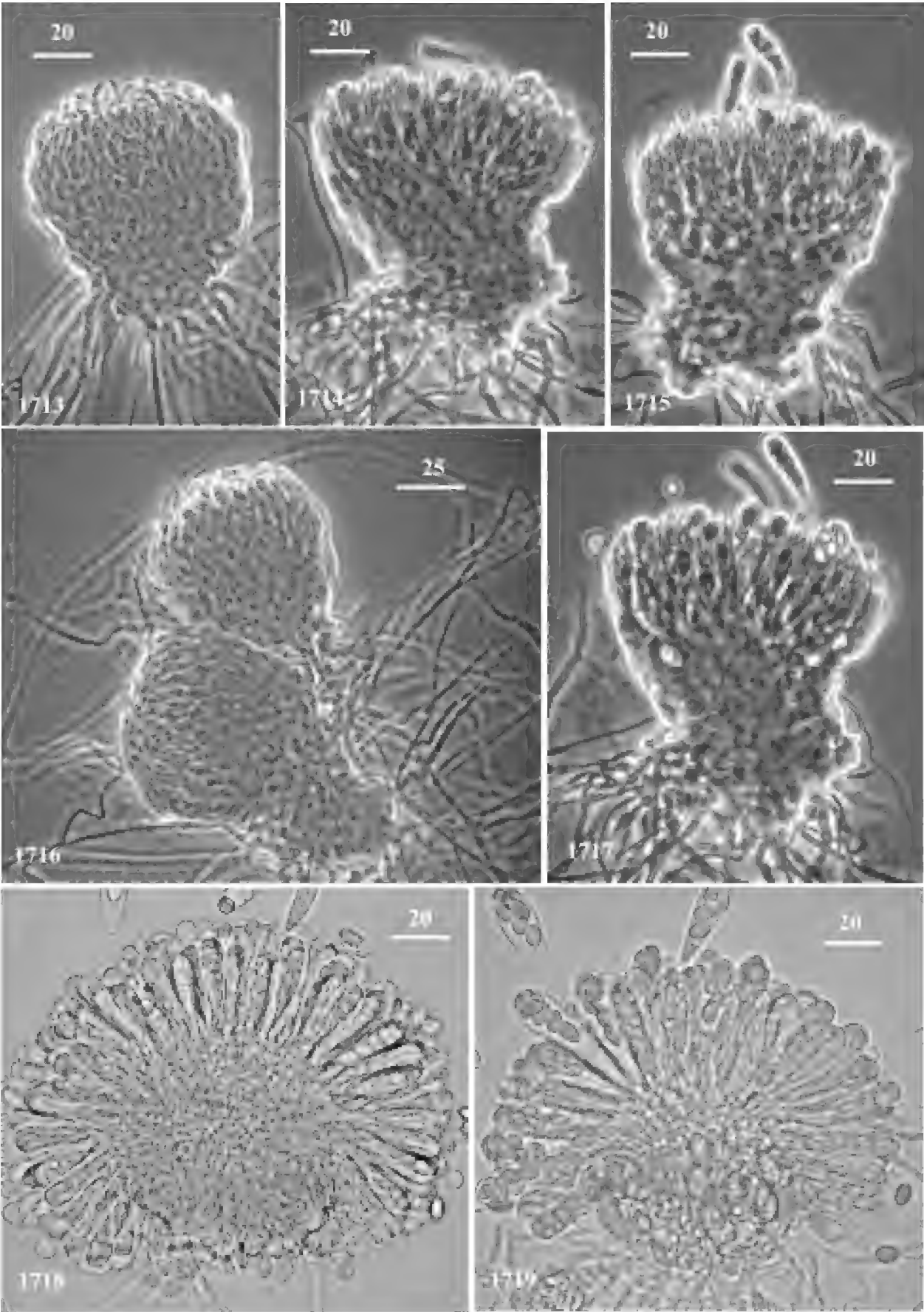
1726, 1727 = Ascomata, in lateral view. (1727 by phase contrast)

1728, 1729 = Asci. (1728 by phase contrast)

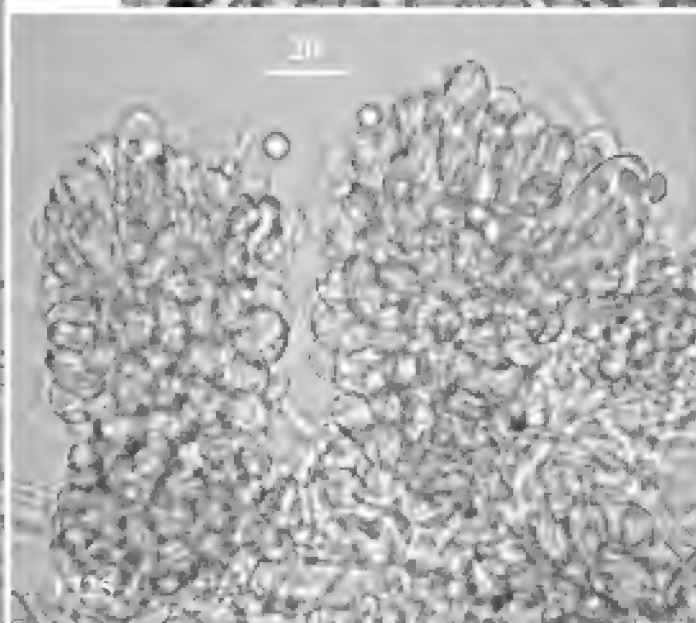
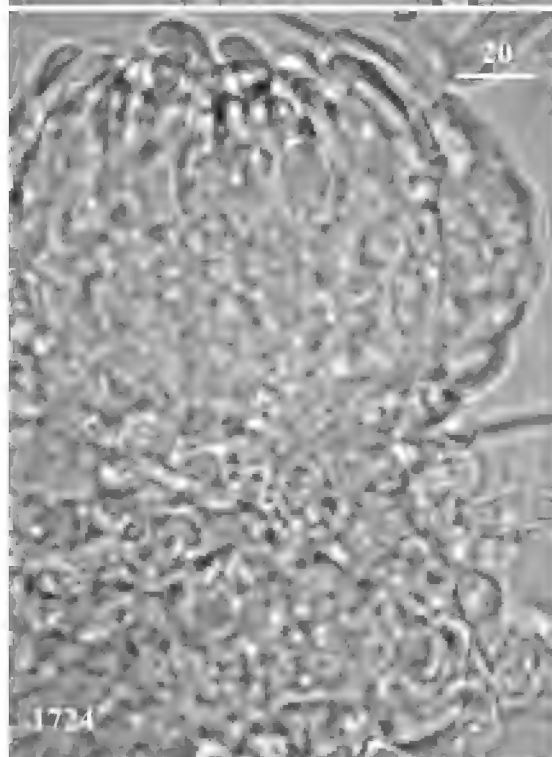
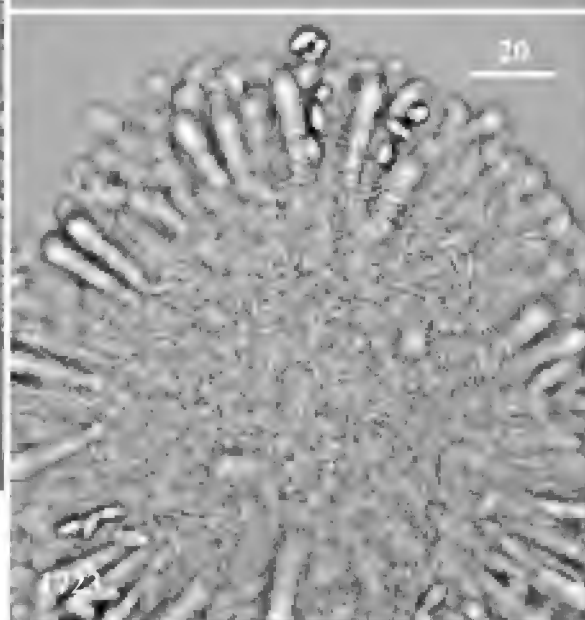
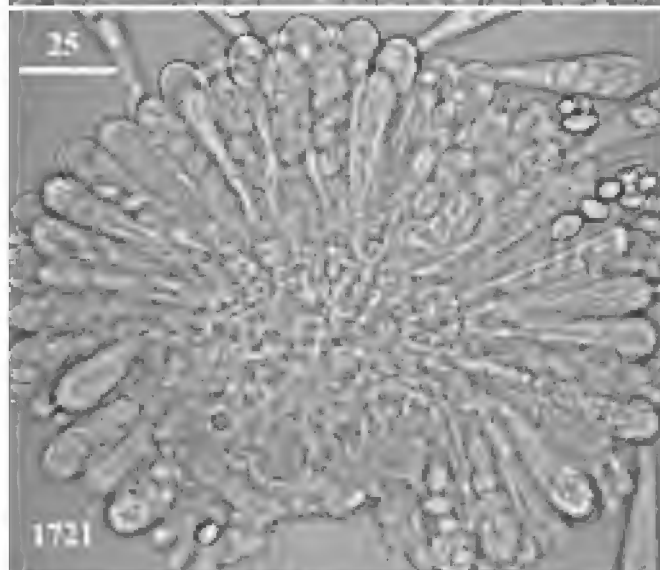
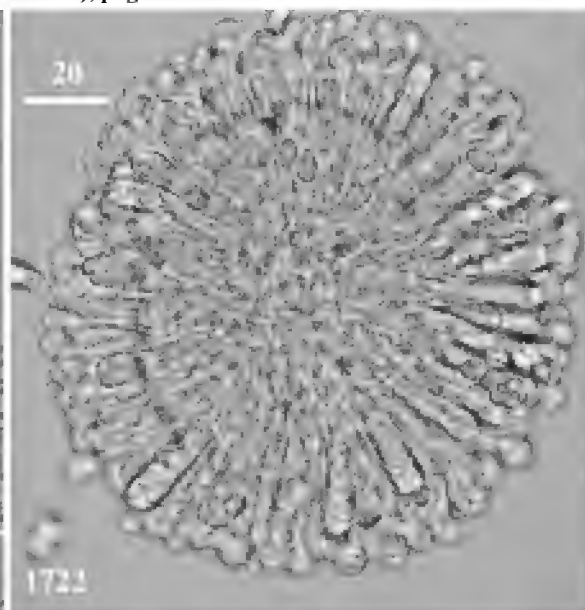
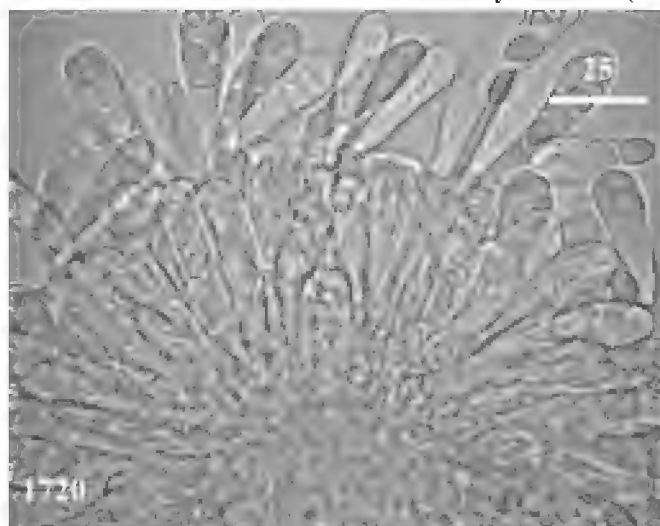
Continue to page 196.

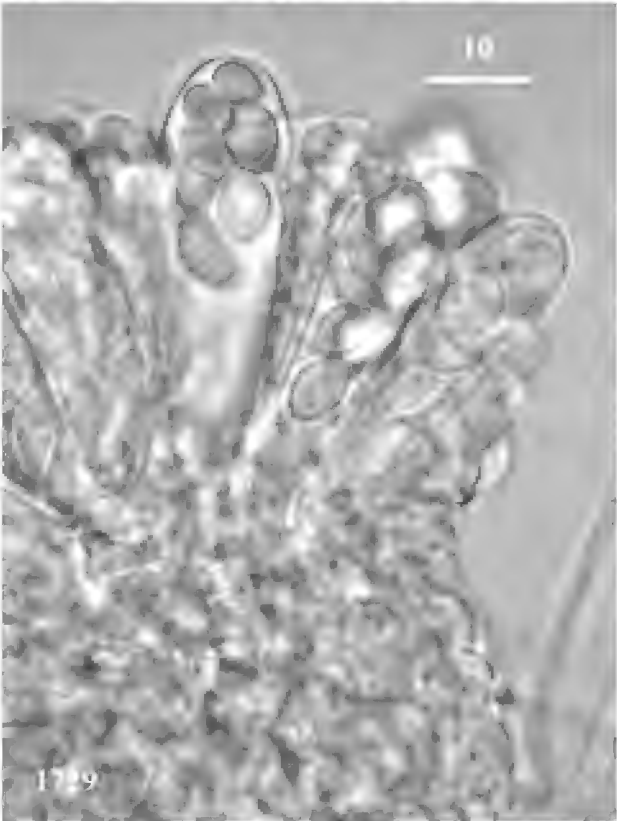
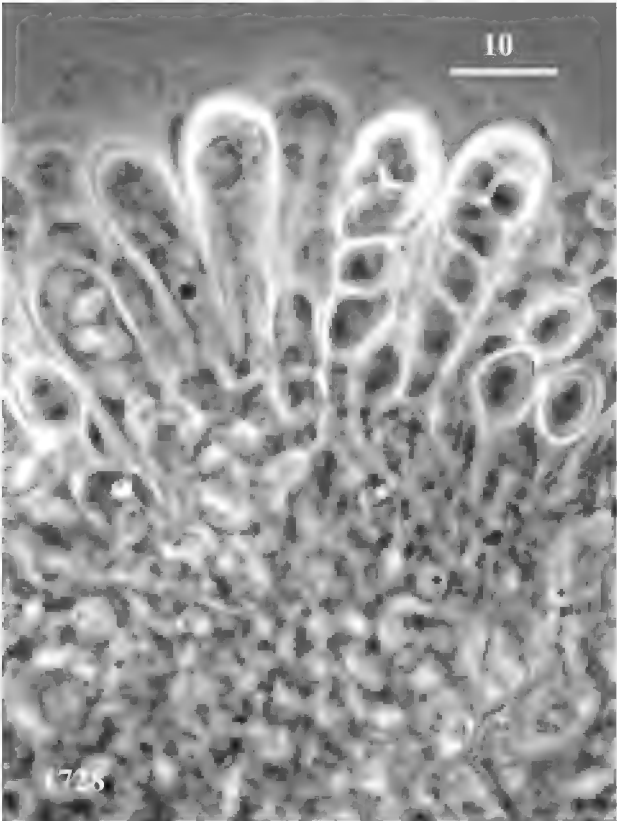
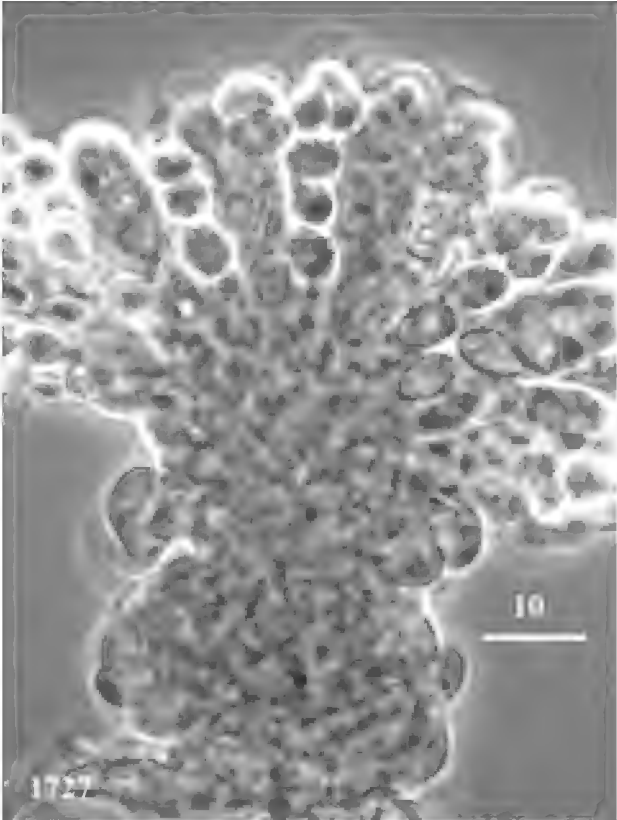
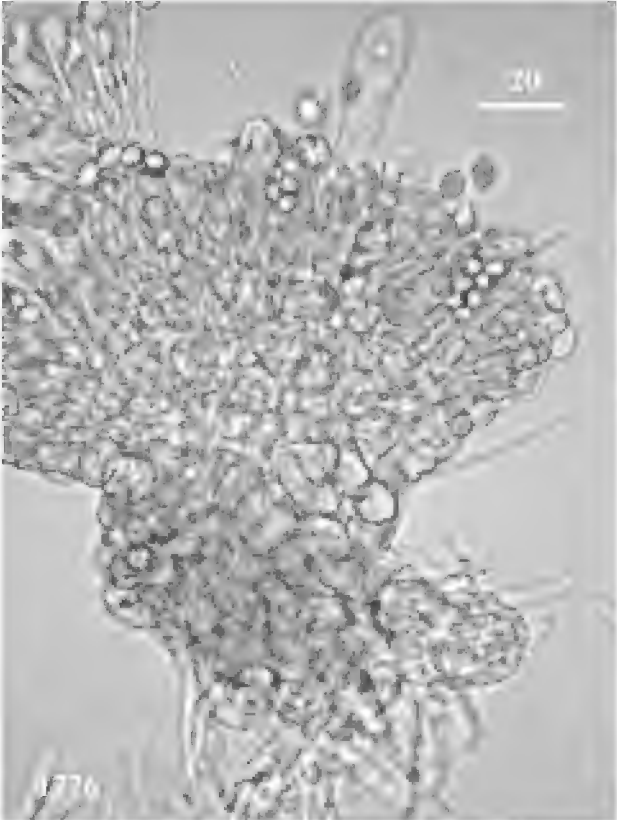


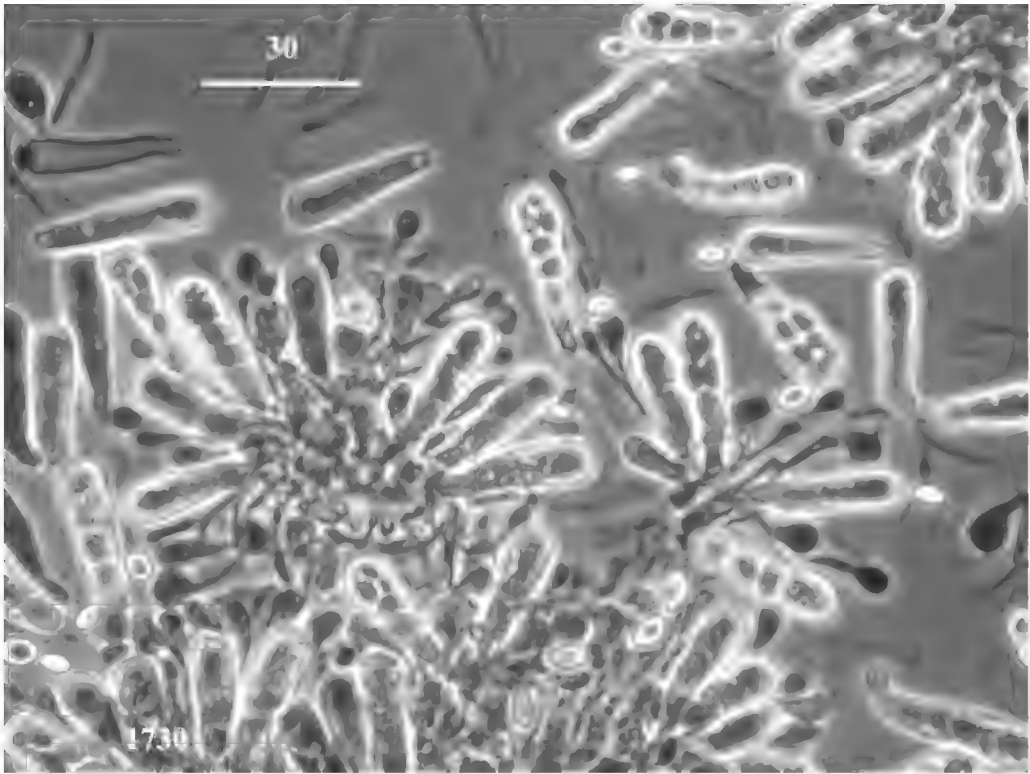


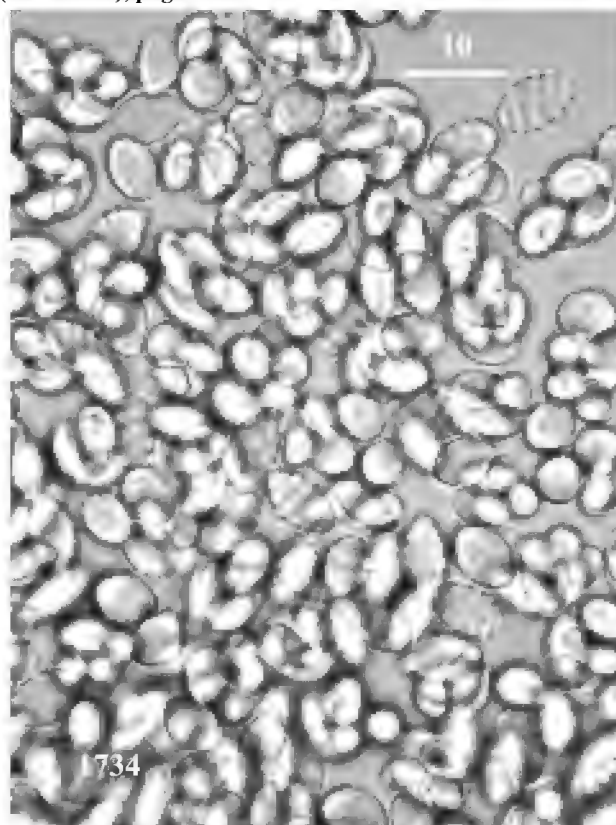
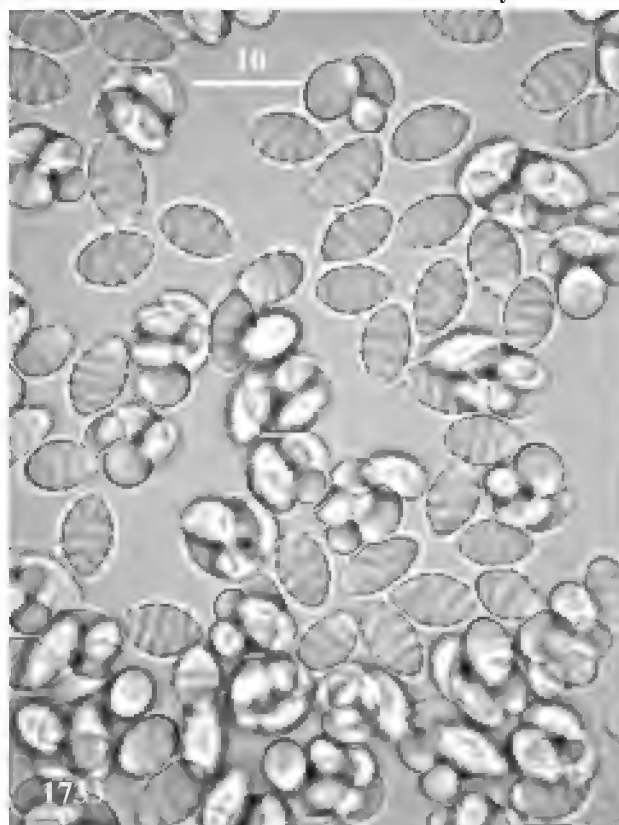












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1730 = Asci and paraphyses from squashed ascoma. ( by phase contrast )

1731, 1732 = Asci. ( by phase contrast )

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1733, 1734 = Ascospores, focused on surface ornamentation.

**1389 *Orbilia tricellularia* sp. nov.**

Anamorphosis: *Tricellula inaequalis* A. J. van Beverwijk (1954), Ant. van Leeuwenh. **20**: 15.

**Descr** Coloniae in b/c-medio tarde crescentes, hyphis aeriis sparsis, abundantibus apotheciis minutis albis postea pallide aurantiacis; *Tricellulae inaequalis*-anamorphosis pauper et inconspicuus.

Apothecia tardissime matura ( per duos vel ultra menses ), superficialia, gregaria vel solitaria, aspectu sicca, non translucientia, depresso sphaerica vel complanate obconica vel cupulata, sessilia ad brevissime stipitata, 60-200  $\mu$  in diam., nec setis nec hyphis marginalibus, alba, postea pallide aurantiaca ( in sicco aurantiaca ); excipulo medullari textura angulari, excipulo ectali textura angulari, subhymenio textura prismatica, hymenio matrice gelatinosa non oblecto ( "not covered by a refractive exudate" ). Paraphyses filiformes, apice non vel leviter inflata, 1-1.5  $\mu$  latae, laeves, hyalinae. Asci cylindro-fusiformes pede angustascentes, 35-42.5 x 7.5-10  $\mu$ , crassitunicatae, non deliquescentes, plusminusve biseriate octospori, sine apicali apparato; maturitate per apicalem perforationem ascosporis liberatae. Ascospores oblongae ad fabiformes, continuae laeves hyalinae, 7-9 x 2.5-3.5  $\mu$ .

Anamorphosis: *Tricellula inaequalis* A. L. van Beverwijk (1954), Ant. van Leeuwenh. **20**: p.15.

Coloniae in PDA tarde crescentes, hyphis aeriis sparsis, aspectu pallide aurantiacae udae, omnino e pionnotes-sporodochiis *Tricellulae inaequalis* compositae. Teleomorphosis deest. **Etym.**: *tricellularia* <= "possession of *Tricellula*" as anamorph.

**Hab** Carioso folio indet. arboris latifoliae in fundo sylvae; Mt. Rokko, Kobe, Japan; March 1999.

**Typus**: cultura b/c-medio exsiccata, MFC-21058.

**Ref** K. S. Thind & M. P. Sharma (1980), Sydowia **33**: 302-310. The family *Orbiliaceae* in India ( *Helotiales* ). // Mats. Myc. Mem. **5**: p. 31, no. 546. 1987. => *Tricellula inaequalis* v. Beverwijk (1954). // D. H. Pfister (1997), Mycologia **89**: 1-23. => About anamorphs of *Orbiliaceae*. // J. Kohlmeyer, H.- O. Baral & B. Volkman-Kohlmeyer (1998), Mycologia **90**: 303-309. => p. 303-304: *Orbilia junci* Kohlmeyer & Volkman-Kohlmeyer n. sp., anamorph: *Dwayaangam junci* Kohlmeyer, Baral & Volkman-Kohlmeyer n. sp. Belonging to *Orbilia* subgenus *Hemiorbilia* Baral (1994).

**Photo**

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1735, 1736 = Habit. Apothecia on PDA.

1737 = Habit. Apothecia on b/c-medium.

1738, 1739 = Apothecia from b/c-medium.

1740, 1741 = Young asci in hymenia. ( by phase contrast )

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1742, 1743 = Asci in hymenial parts. ( by phase contrast )

1744, 1745, 1746, 1747, 1748 = Asci from strongly squashed apothecia. ( by phase contrast )

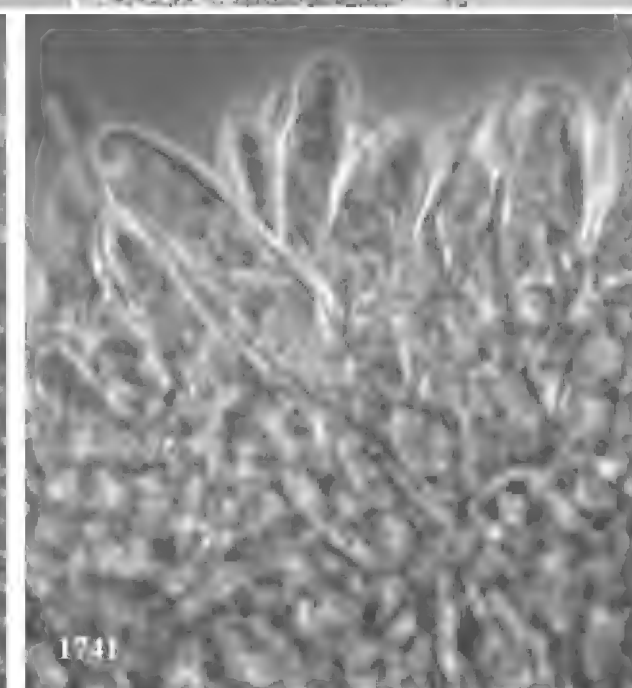
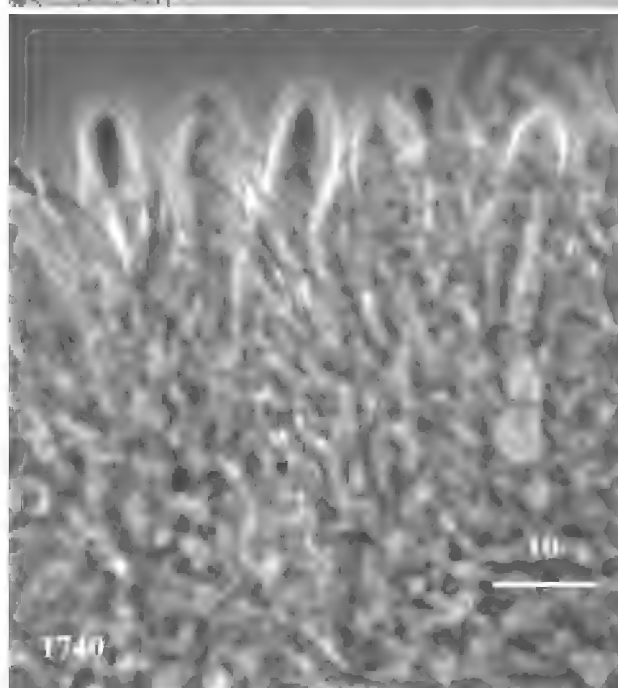
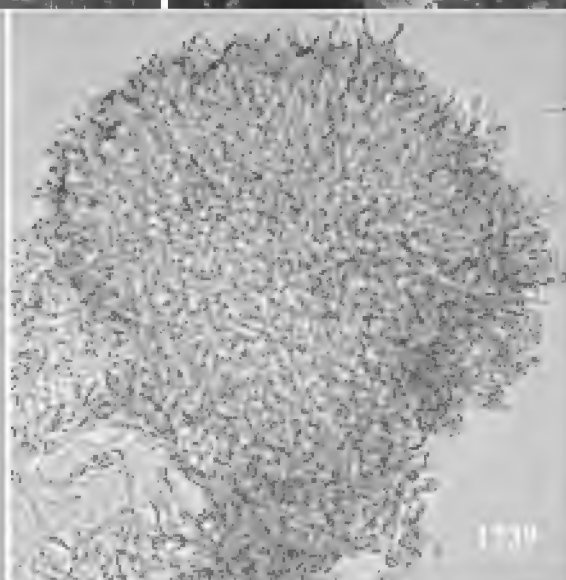
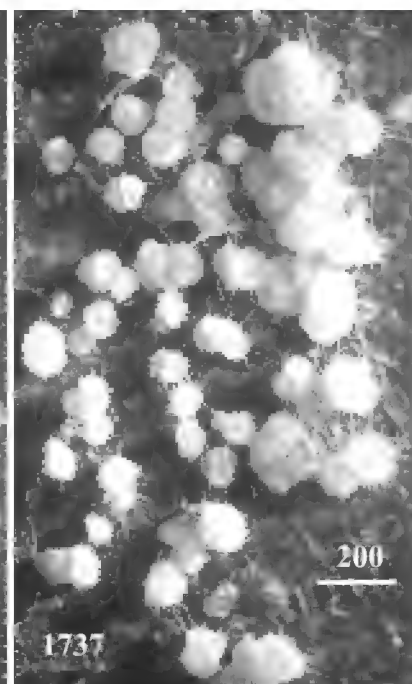
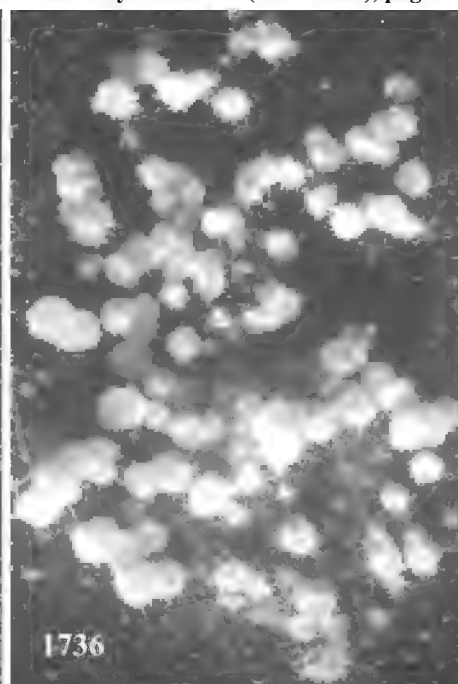
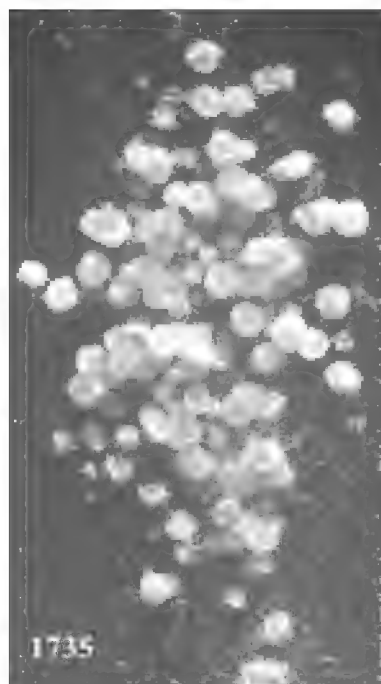
1749, 1750, 1751 = *Tricellula* conidia, from PDA. ( by phase contrast )

page 211 ( color plate )

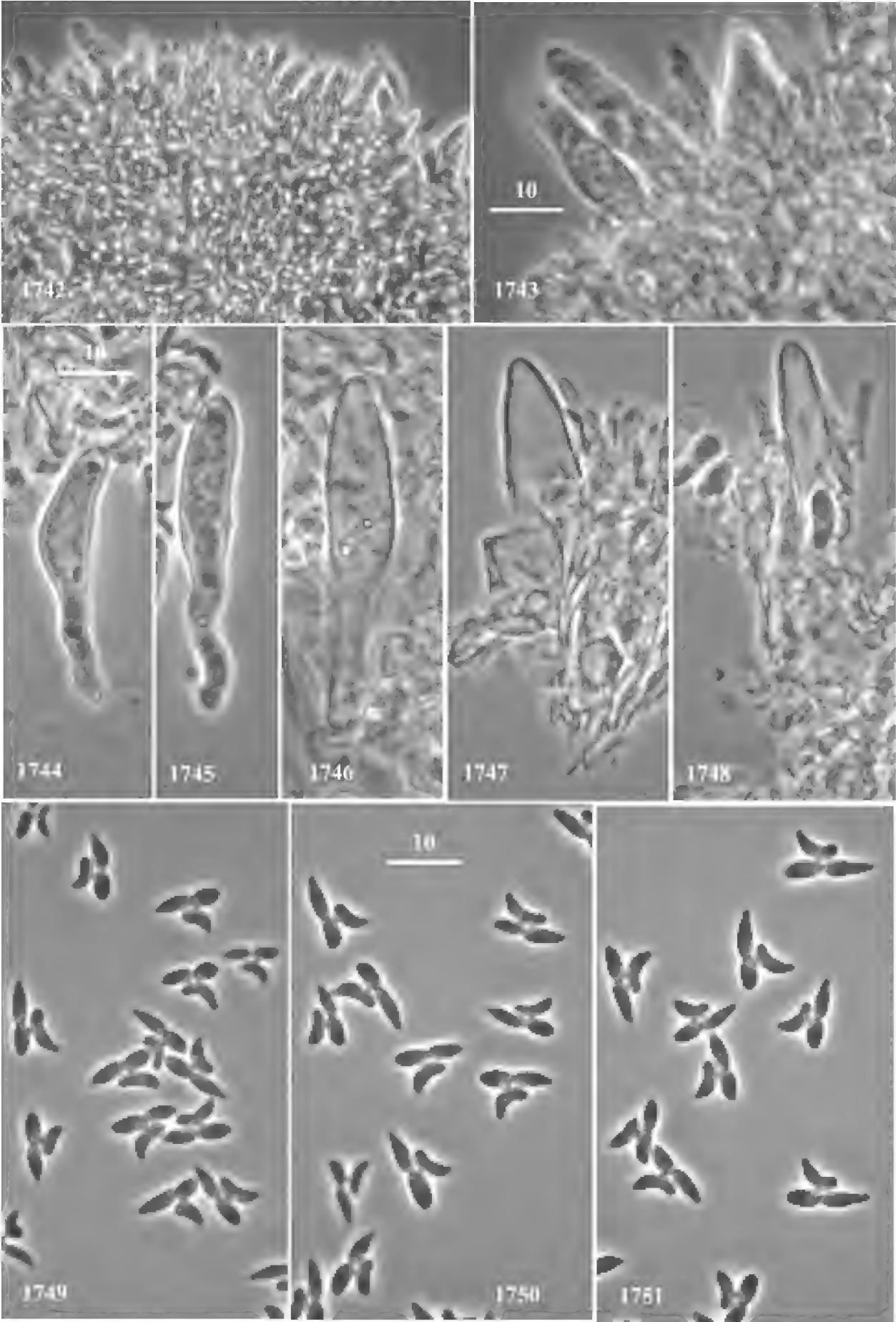
1814, 1815 = Habit. Apothecia on PDA.

1816 = Habit. Apothecia on b/c-medium.









**1390 *Byssonectria globifila* sp. nov.**

**Descr** Coloniae in b/c-medio diffusae, hyphis aeriis pauperis, apotheciis abundantibus dispersis. Apothecia intra hebdomades duas matura, generatim aggregata, superficialia, obconica ad cupulata, non-stipitata, ad basim in substratum radicantia, ab apice visa 150-600  $\mu$  diam., a latere visa 130-550  $\mu$  alta, primo pallide crenea postea modice brunnea; excipulum ectale modice brunneum, nec setis nec pilis nec hyphis specialibus, textura angulari ad plusminusve textura globulosa, e cellulis 10-25  $\mu$  diam. compositum; excipulum medullare textura angulari ad plusminusve textura globulosa, e cellulis 5-20  $\mu$  diam. compositum, infra pallide brunneum sursum incolorascens; subhymenium e cellulis cylindricis longitudinaliter parallelis non connatis tenuitunicatis hyalinis constrictis ad septa plusminusve torulosis, usque ad 28  $\mu$  longis 2.5-7  $\mu$  latis compositum; stratum hymenii incoloratum ad pallidissime brunneum, plusminusve gelatinosum, ex ascis et paraphysibus compositum. Asci cylindrici, 105-130  $\mu$  longi, 9-11.5  $\mu$  lati, pede brevo angusto 7.5-22  $\mu$  longo, J (-), apice rotundati, octospori, apice operculati ad emissionem ascosporarum. Paraphyses cylindricae continuae vel pauciseptatae, 2-3.5  $\mu$  latae, apice valde inflatae praecipue globosae interdum clavatae ad ellipsoideae 5-30  $\mu$  diam. Ascosporae initio oblique uniseiate in ascis dispositae, ellipsoideae, 14-17.5 x 6-7  $\mu$ , crassitunicatae laeves guttulae hyalinae, sine poro germinali. Anamorphosis abest. Chlamydosporae desunt.

Coloniae in CMA cito diffusae, hyphis aeriis pauperis, apotheciis solitariis vel gregariis, praecipue superficialibus interdum sub-immersis. Hyphae vegetativae ramosae septatae laeves hyalinae, 1.5-7.5  $\mu$  latae. **Etym.:** *globifila* <= apically "globose filaments ( paraphysis )".

**Hab** E solo sylvae; Kobe Municipal Arboretum, Kobe, Japan; April 2000. **Typus:** cultura CMA exsiccata, MFC-21082.

**Ref** D. H. Pfister (1993), Mycologia **85**: 952-962. A synopsis of the Noerth American species of *Byssonectria* ( *Pezizales* ) with comments on the ontogeny of two species.

**Photo**

page 201

1752 = Habit. Apothecia on CMA, 2 weeks at 25 C.

1753, 1754, 1755 = Parts of hymenial layers, from squashed apothecia. ( by phase contrast )

1756, 1757, 1758 = Paraphyses, from squashed apothecia. ( by phase contrast )

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1759, 1760 = Paraphyses, from squashed apothecia. ( by phase contrast )

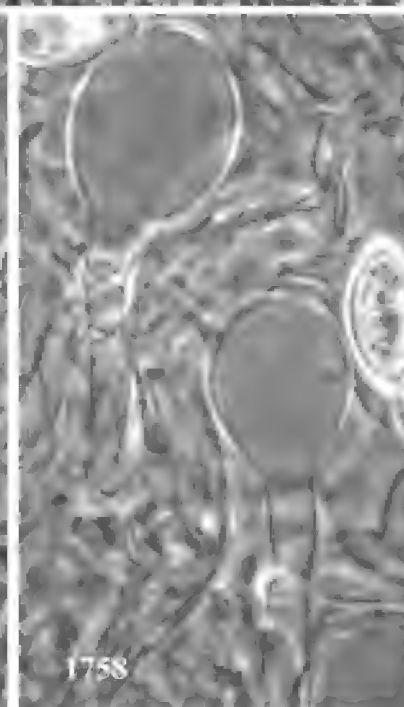
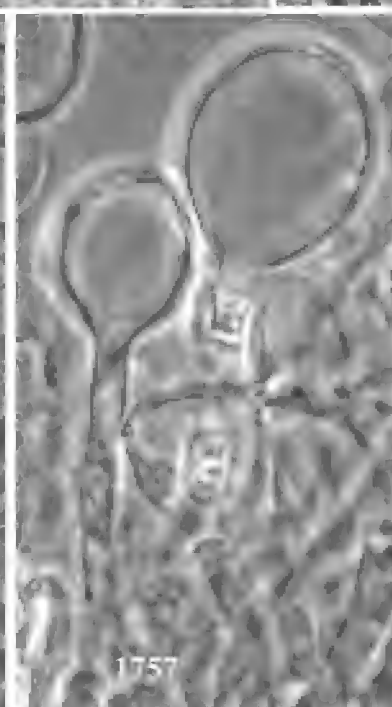
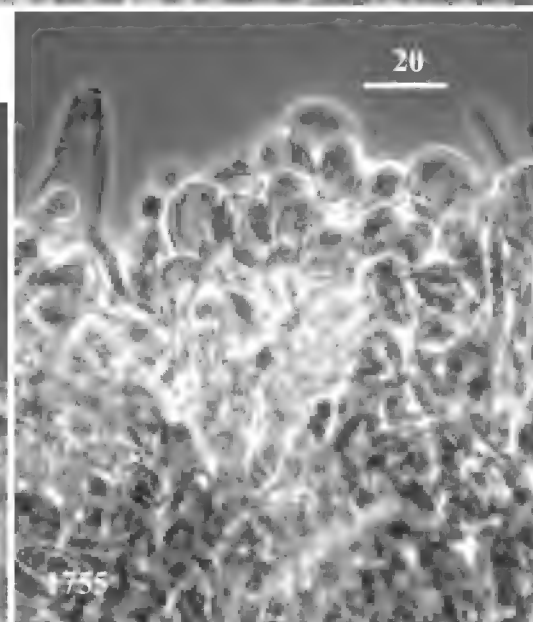
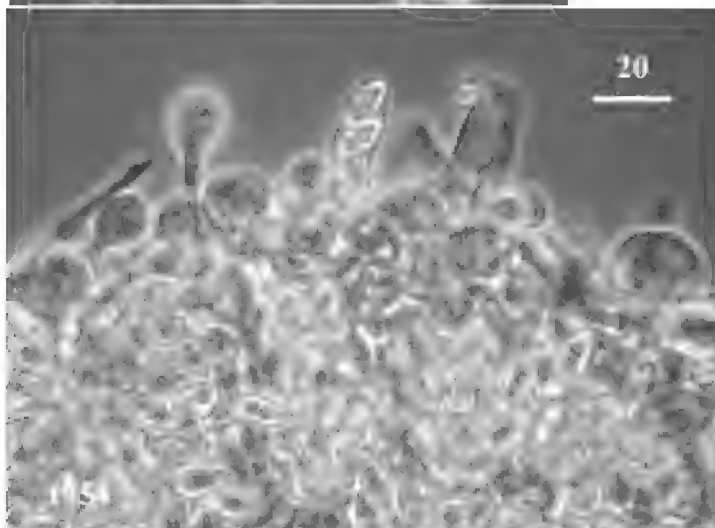
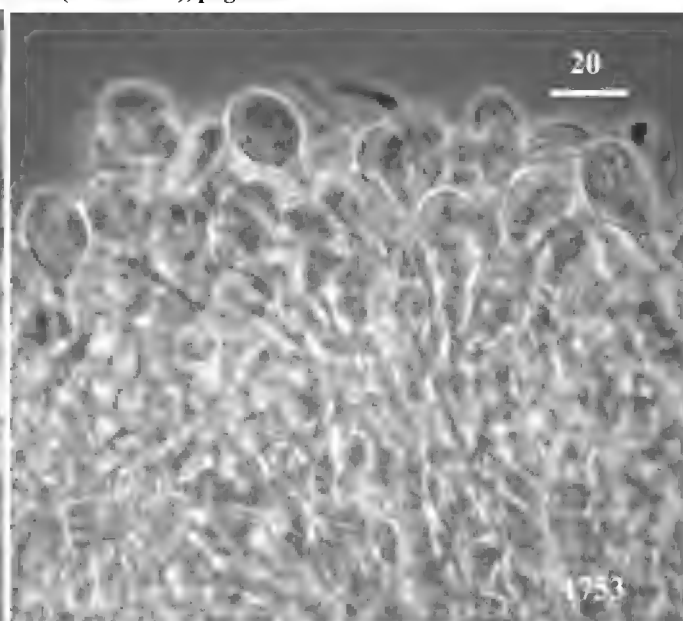
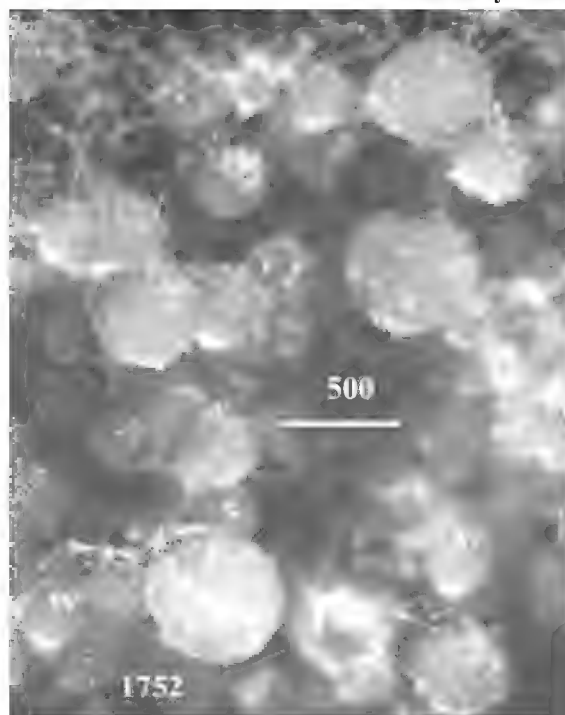
1761, 1762 = Apical and basal parts of asci. ( by phase contrast )

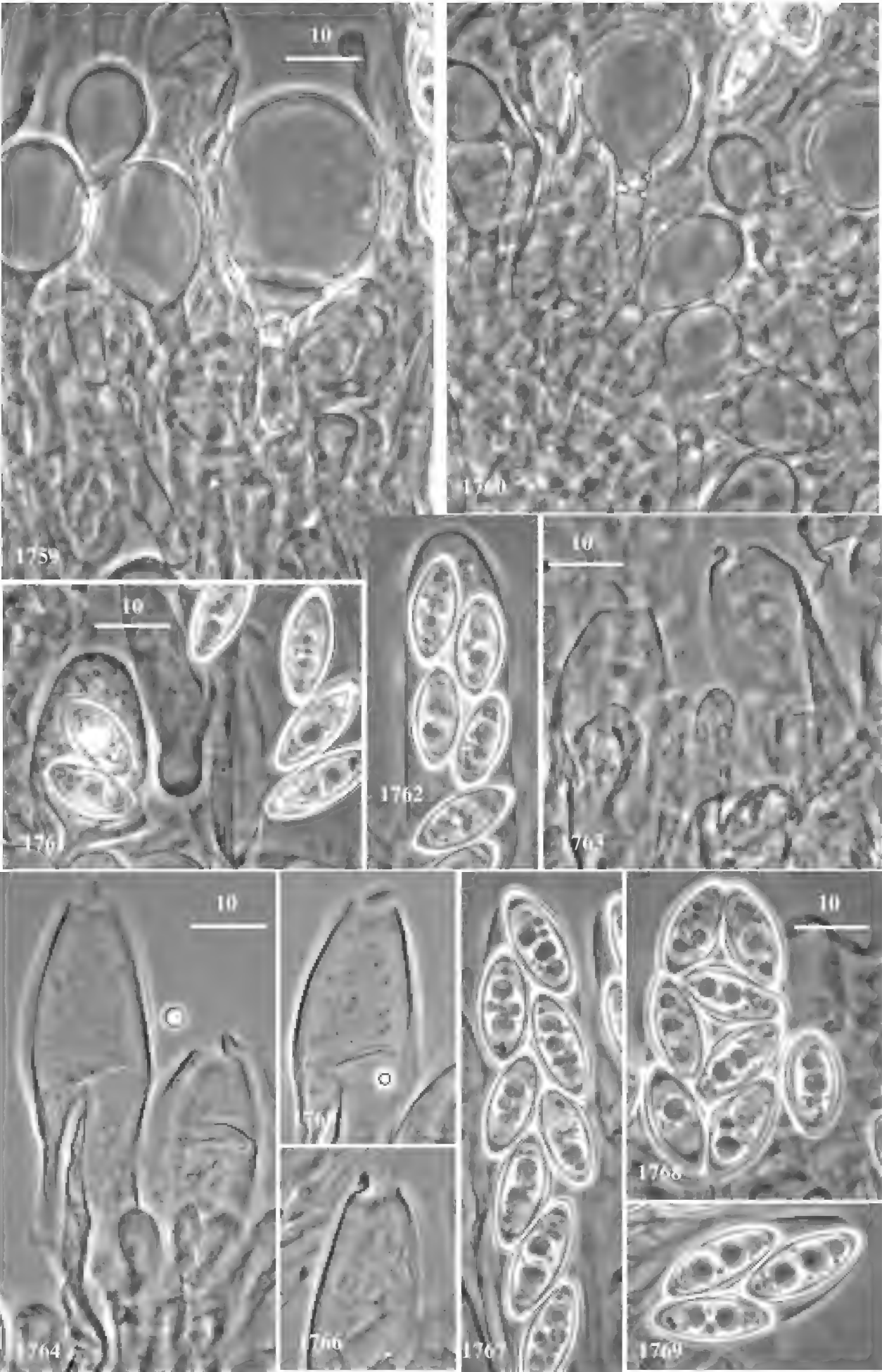
1763, 1764, 1765, 1766 = Apices of asci with opercula. ( by phase contrast )

1767, 1768, 1769 = Ascospores. ( by phase contrast )

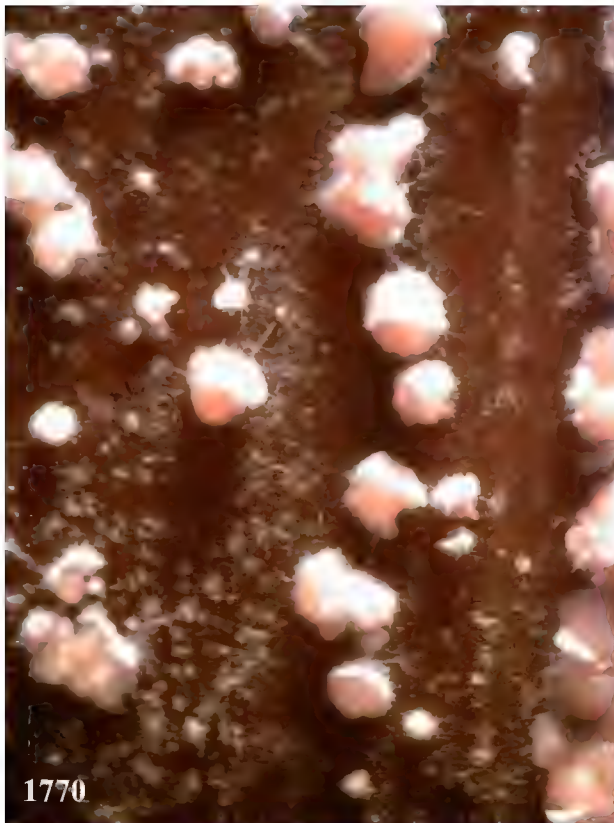
page 213 ( color plate )

1822, 1823, 1824 = Habit. Apothecia on CMA, 2 weeks at 25 C.









1770, 1771 = no. 1337, page 6.

1772 = no. 1339, page 11.

1773 = no. 1341, page 16.



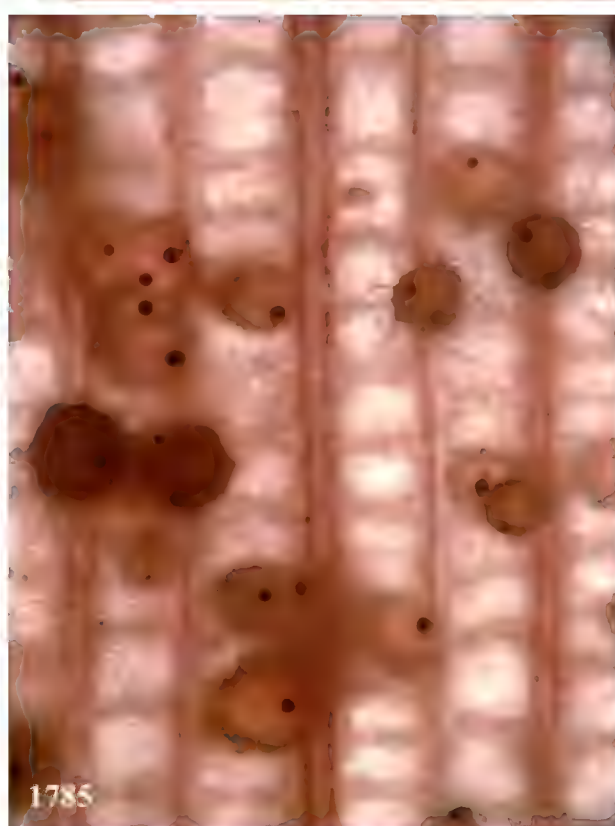
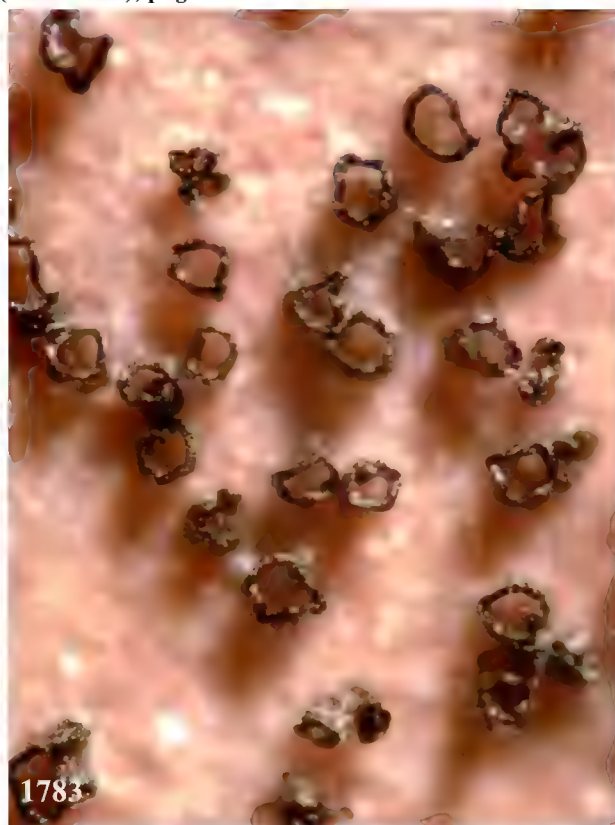
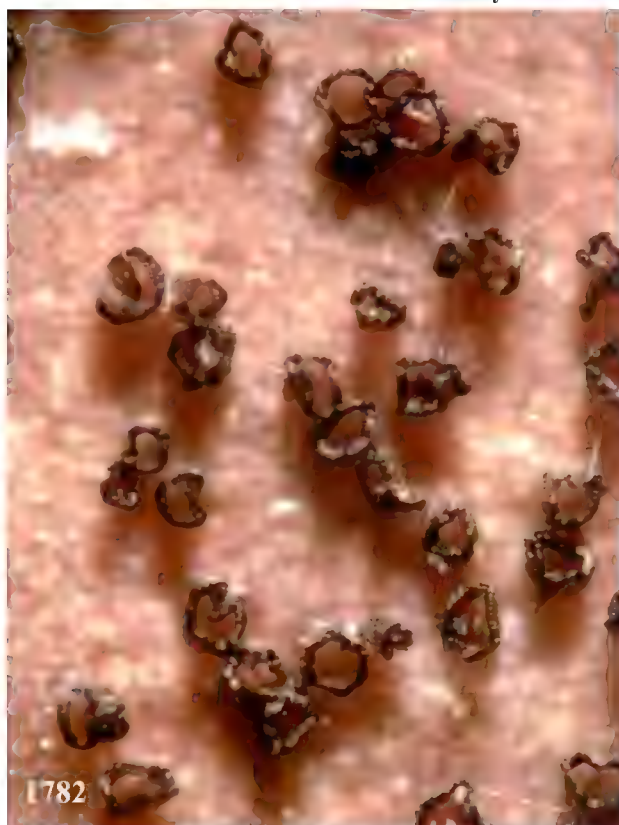
1774, 1775 = no. 1341, see page 16.

1776, 1777 = no. 1345, see page 30.





1778, 1779, 1780, 1781 = no. 1350, page 49.



1782, 1783 = no. 1351, see page 52.

1784 = no. 1356, see page 71.

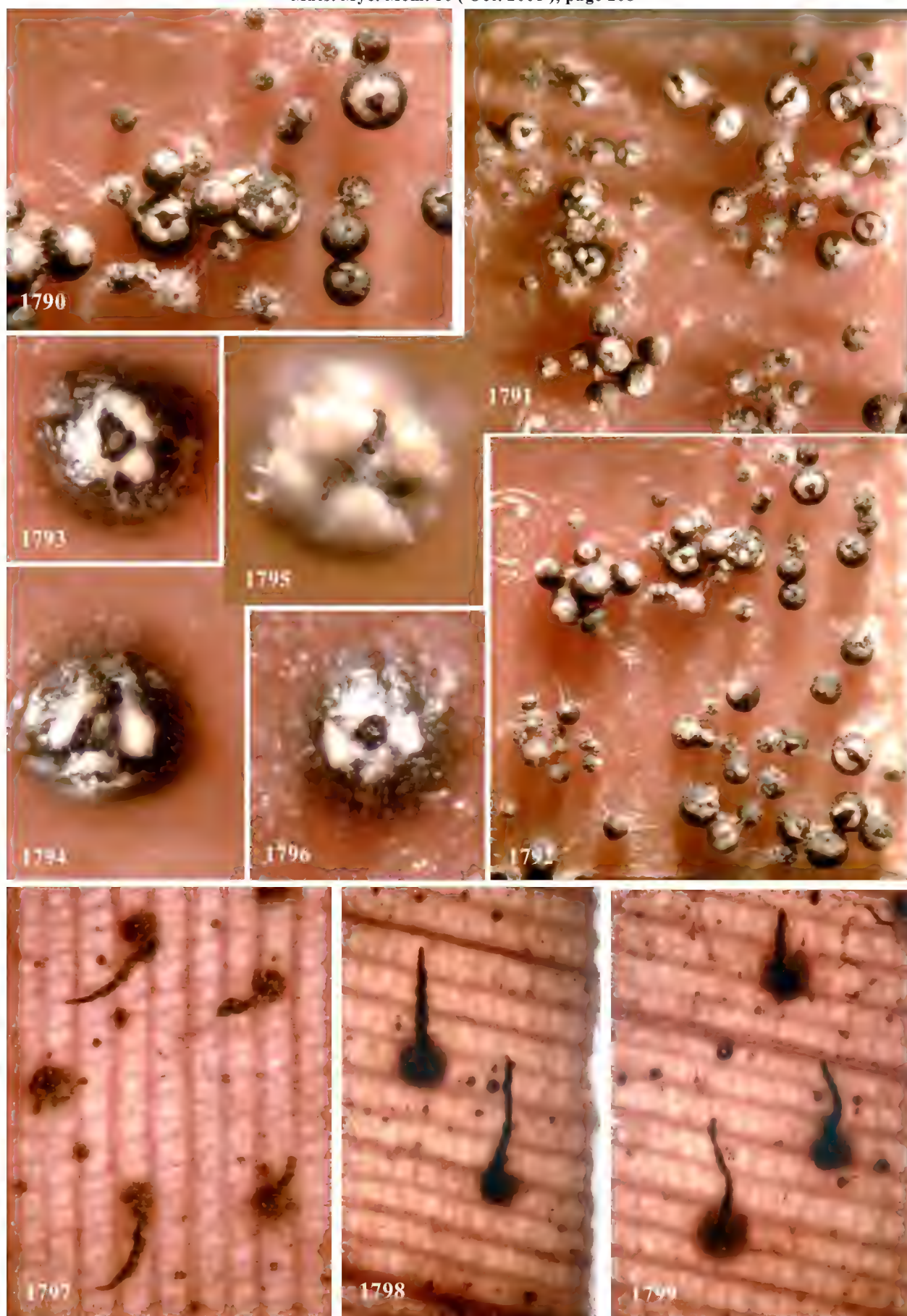
1785 = no. 1357, see page 74.





1786, 1787 = no. 1357, page 74.

1788, 1789 = no. 1358, page 77.



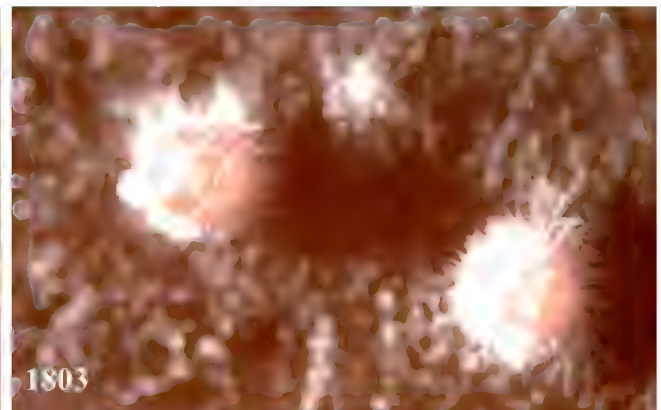
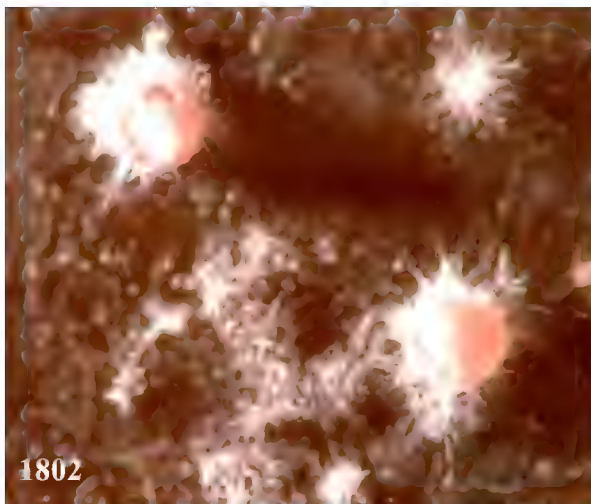
1790 - 1796 = no. 1359, see page 80.

1797, 1798, 1799 = no. 1360, see page 83.

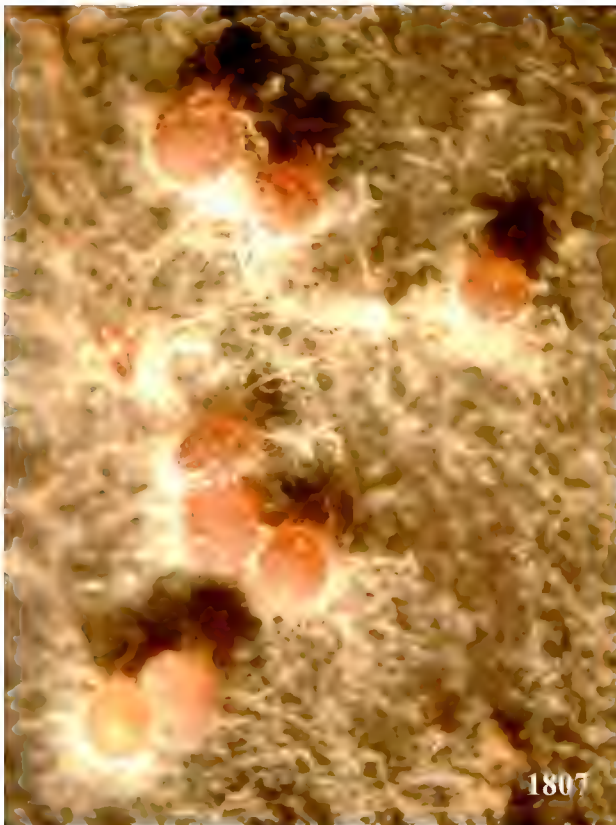




1800, 1801 = no. 1367, see page 112.



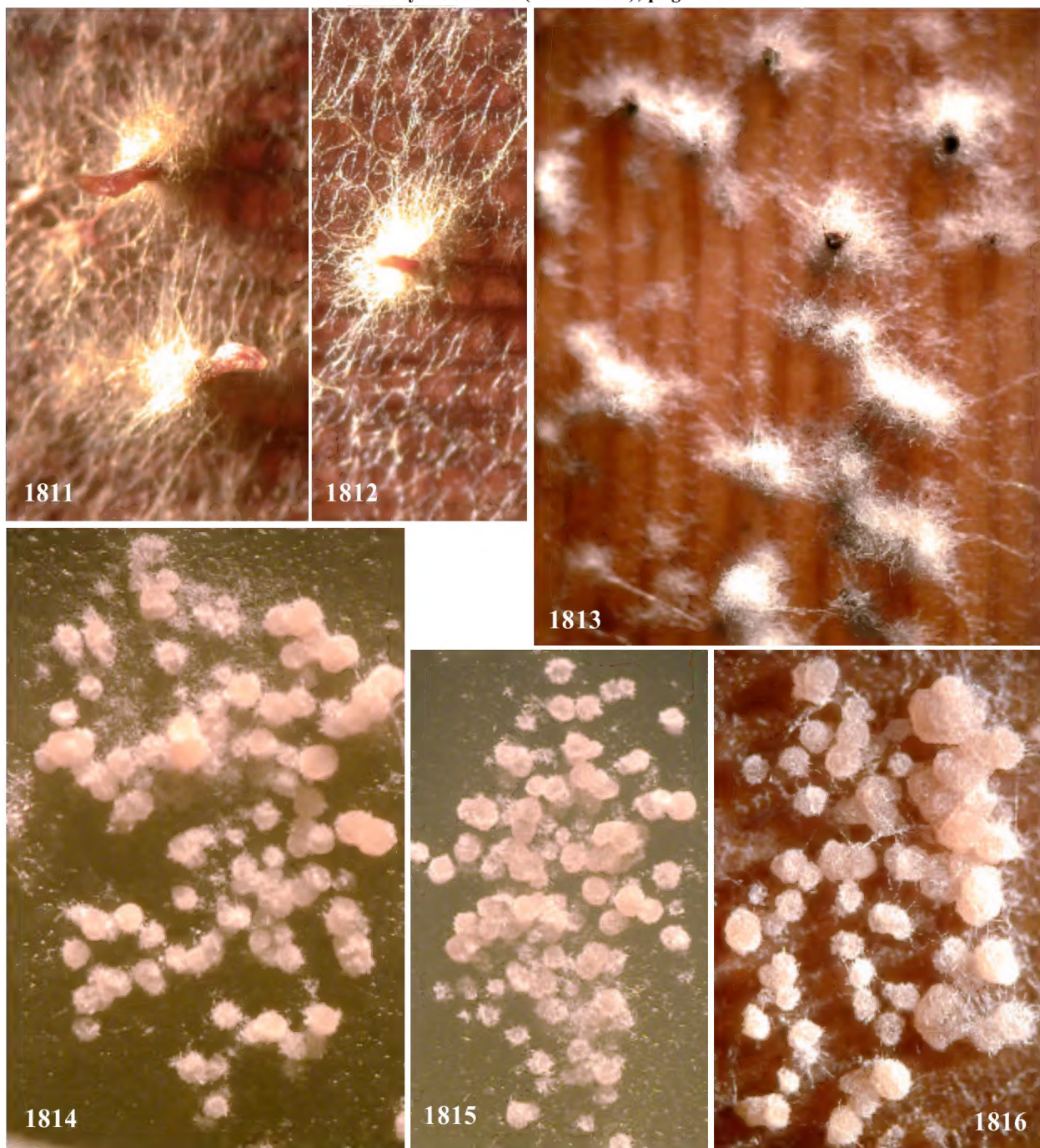
1802, 1803, 1804, 1805, 1806 = no. 1373, see page 132.



1807 = no. 1373, see page 132.

1808, 1809, 1810 = no. 1374, see page 136.



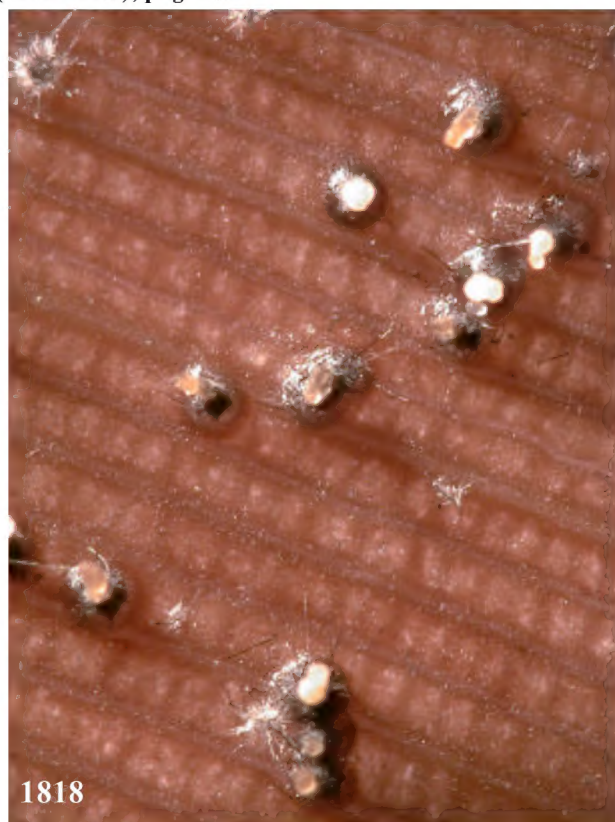
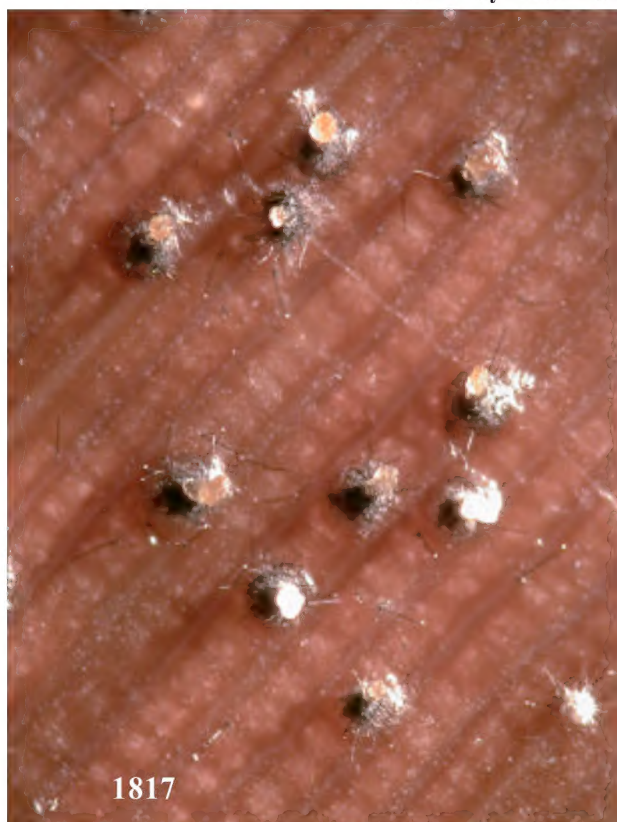


1811, 1812 = no. 1379, see page 159.

1813 = no. 1384, see page 176.

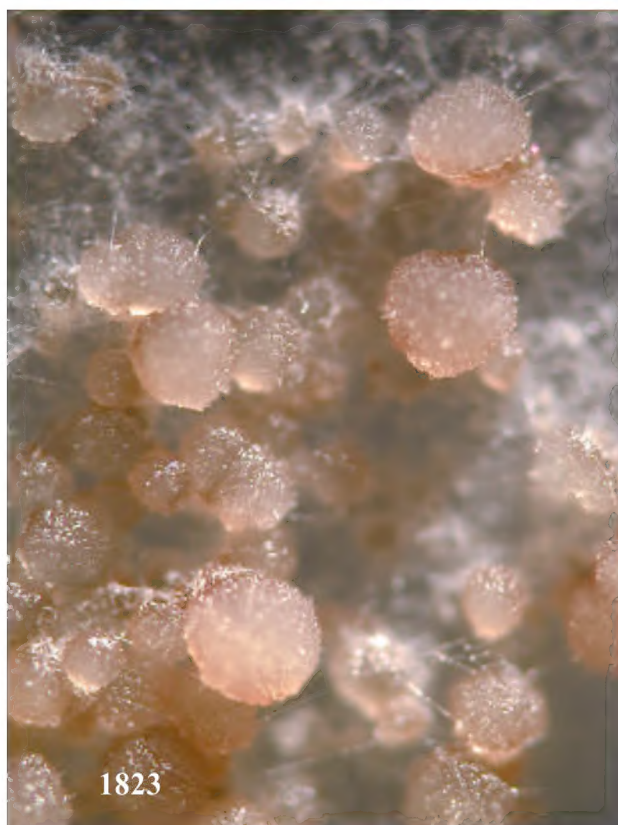
1814, 1815, 1816 = no. 1389, see page 197.





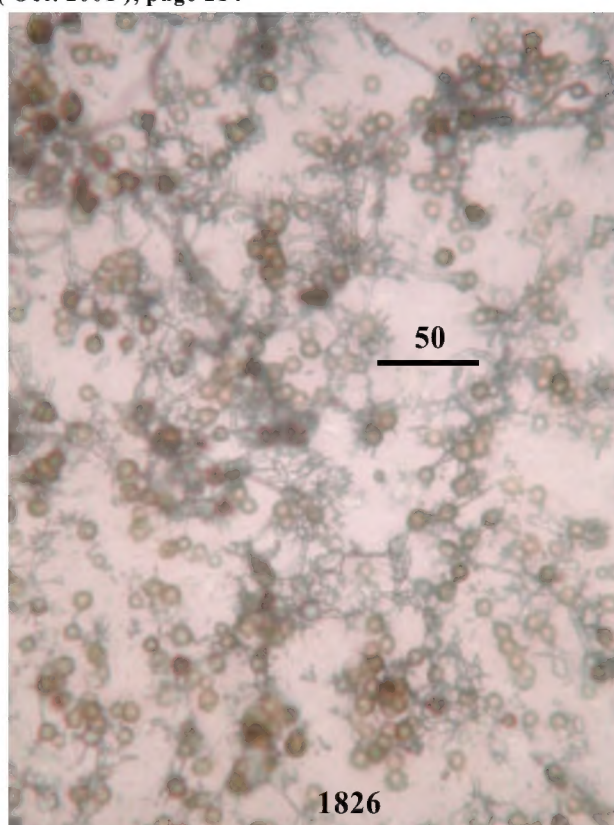
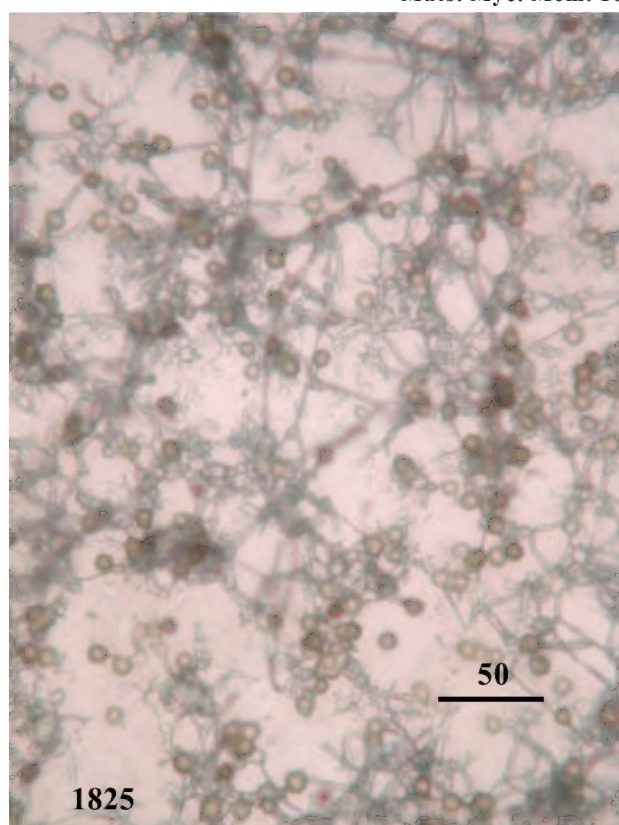
1817, 1818, 1819 = no. 1385, see page 179.  
1820 = no. 1387, see page 186.





1821 = no. 1387, see page 186.

1822, 1823, 1824 = no. 1390, see page 200.



1825, 1826 = no. 1364, see page 98.